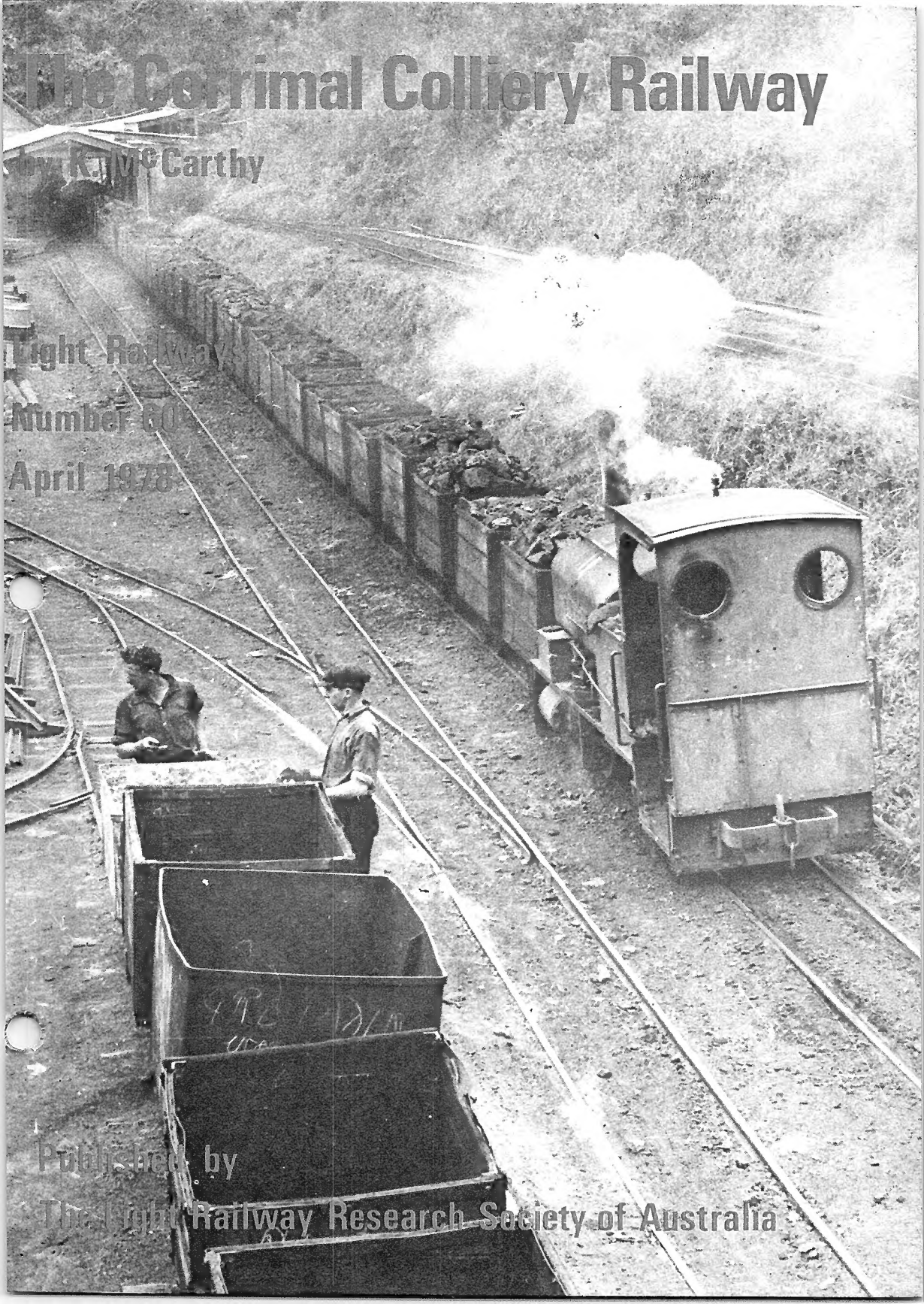
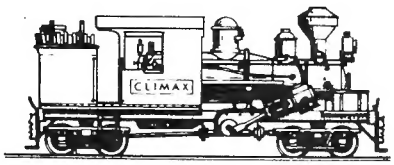
The Corrimal Colliery Railway

by K.J. McCarthy



Light Railways
Number 60
April 1978

Published by
The Light Railway Research Society of Australia



Light Railway Research Society of Australia

COUNCIL
President Geoff Maynard
Parkers Corner via Erica 3825 (051 65 3242)
Vice President Frank Stamford,
9 McGregor Street, Canterbury 3126 (83 5873)
Secretary Arthur Straffen
Kings Road, Harkaway 3806 (707 1985)
Treasurer Robert Marriott
Flat 3, 107 Victoria Road, Hawthorn East 3123 (824619)
Publications Editor Vacant
Sales & Marketing Officer Stephen Martin
7 Talaskia Road, Upper Ferntree Gully 3156 (758 1073)
Committee men Mike McCarthy, Ted Stuckey (co-opted)
Bill Jessup (co-opted)
Membership Officer Andrew Hennell
26 Karma Ave., East Malvern, Vic. 3145 (211-1634)
Annual Subscription $4.20 for year ending 31 May 1977.

NEW SOUTH WALES DIVISION
Address P.O. Box 290, BURWOOD NSW 2134

Officer Bearers
President Paul Simpson
Secretary Dick Mason
Treasurer Alan Watson

MEETINGS, Sydney: Fourth Wednesday every second month at 7.30 pm, Conference Room Rechabite House, 85 Campbell Street, Surry Hills. Next meetings 22 June, 24 August, 26 October, 14 December. **Melbourne:** Second Thursday every second month at 8.00 pm, room 11, Victorian Railways Institute, Flinders Street Station building. Next meetings 9 June, 11 August, 13 October, 8 December.

Whilst every effort is made to ensure the accuracy of articles published in *Light Railways* errors may creep in. Additional information is being discovered all the time, and this sometimes contradicts previous information.

If you see any errors, or can add information, please contact the editor, and so help us to record the full history of Australia's light railways.

Historical references to sums of money in *Light Railways* are in Australian pounds (£). One pound equalled two dollars on changing to decimal currency in 1966.

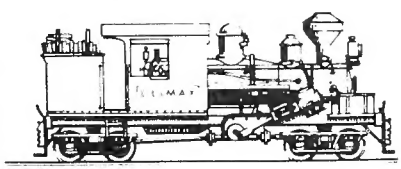
Articles and news items are always welcome. It greatly assists the editors if they are typed or written on one side of the paper only and double spaced.

Copyright All articles and illustrations in this publication remain the copyright of the author and publisher. They may not be reproduced wholly or in part without the written permission of the editor or the author.

Recommended reading:

SAWDUST AND STEAM by Norm Houghton. A history of railways and tramways in the East Otways, including Forrest, Apollo Bay, Wye River, Kennett River, Lorne and Barwon Downs. 106 pages, 12 plans and maps, 60 photographs. $4.20

TALL TIMBER AND TRAMLINES An illustrated introduction to Victoria's timber tramways, reprinted as a result of many requests for this popular publication. 61 photographs dating from the 1870s to the 1940s, six maps, 60 pages. Price $4.10



ALL PRICES INCLUDE POSTAGE

Available from:
LRRSA Sales
7 Talaskia Road
UPPER FERNTREE GULLY 3156

The Corrimal Colliery Railway

by K. McCarthy

Maps and drawings by the author

Layout and production by L. & P. Simpson

ISBN 0 909340 06 4

Front cover:

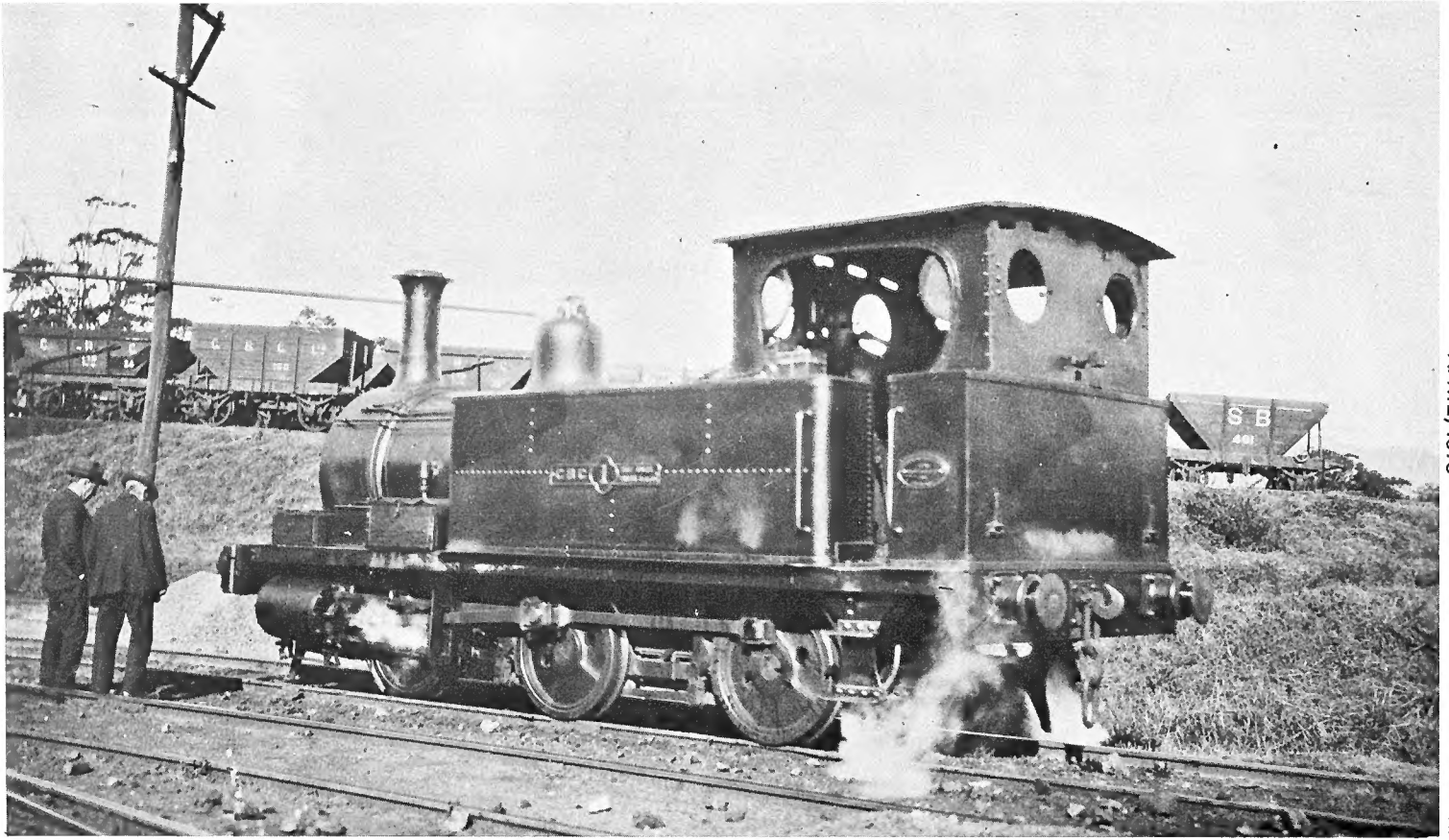
"Burra" in the Corrimal Mine yard. One of the unusual single blade points can be seen at the left. Sept. 4th 1951 *B. Parle photo.*

Light Railways No. 60 April 1978

Registered for posting as a periodical category B

Published by

The Light Railway Research Society of Australia



Standard gauge 0-6-0 CBC-1 simmers on a sunny day on the low level sidings - Corrimal c-1934.
P.T.C. NSW - Archives Photo.

Introduction

When the Illawarra Light Railway Museum Society was formed in December 1971, its first major project was the retrieval of rail from the disused and abandoned 2 ft gauge Corrimal Colliery railway, to provide track plant for relaying at the Society's museum site.

The retrieval programme was a major undertaking. The track was perched on the steep Illawarra Escarpment, along the 400 ft. contour and before lifting could be undertaken, the thick scrub and lantana had to be cleared in this snake, tick and leech infested location. Most of the track had to be resleepered and about a quarter of the plant re-fishplated, while two washaways had to be bridged and the soil moved from a cutting which had been buried in a land slide.

A store location was established at the top of a steeply graded fire or survey trail near the centre of the railway location and the rails lifted from each end towards this centre point. The retrieved track had next to be dragged by four wheel drive vehicle down the trail to a hard surfaced road where it could be loaded, with difficulty, onto semi trailer lorries.

Work commenced on scrub clearing on April 16th 1972, and the last track lengths were transported away from the colliery property on August 28th 1976. During this period the ILRMS volunteer work force was also active in other retrieval and preservation projects, including the establishment of the museum at Albion Park, but the Corrimal project was the key to getting the museum underway. Having a major task on hand like this at the beginning of the museum's existence, instead of the membership sitting around while the search for a permanent site progressed, welded an efficient work force together, and showed prospective members at the very beginning that the establishment of a museum society is nothing but hard work.

In all, almost 35 tons of 25lb to 31 lb per yard rail were obtained from the Corrimal railway, together with many other interesting artifacts, while various features of the Corrimal railway were noted and recorded; historical facts which would have vanished if this project had not be launched.

Some readers may ask, why was this material not left for future industrial archaeological inspections. The action of the ILRMS was, however, completely justified. The railway was precariously located in a very high rainfall area, with the result that the sleepers had all but rotted away since the 1950's. Some lengths of rail had already rotted through at the web, while considerable parts had already been lifted and taken away from the location at easily reached sections.

The one major bridge on the line was in a very dangerous condition, while undesirable characters had already choked some ravines with derailed skips which caused drainage problems in wet weather.

With the recent growth of trail bike activities, this once isolated area is now infested with riders, so the Australian Iron and Steel Collieries section was pleased to allow the ILRMS members clear the area of rails and skips, so that a growing danger hazard could be removed from the area.

The 2 ft gauge railway was situated on a very attractive site from which glorious views of the ocean and coastal plain could be seen through the surrounding rain forest. It could not be developed as a museum railway, however, as access could not be gained from the colliery yard end, and the approach from the old incline end was too steep to be practical. Access from this northern end is now impossible as the property around the old screens is being progressively subdivided for residential building.

The story of the re-opening and retrieval of the plant could not be related earlier, while the rail was stacked on the mountain, as this would have encouraged scrap thieves resulting in the thousands of hours of labour being all for nothing.

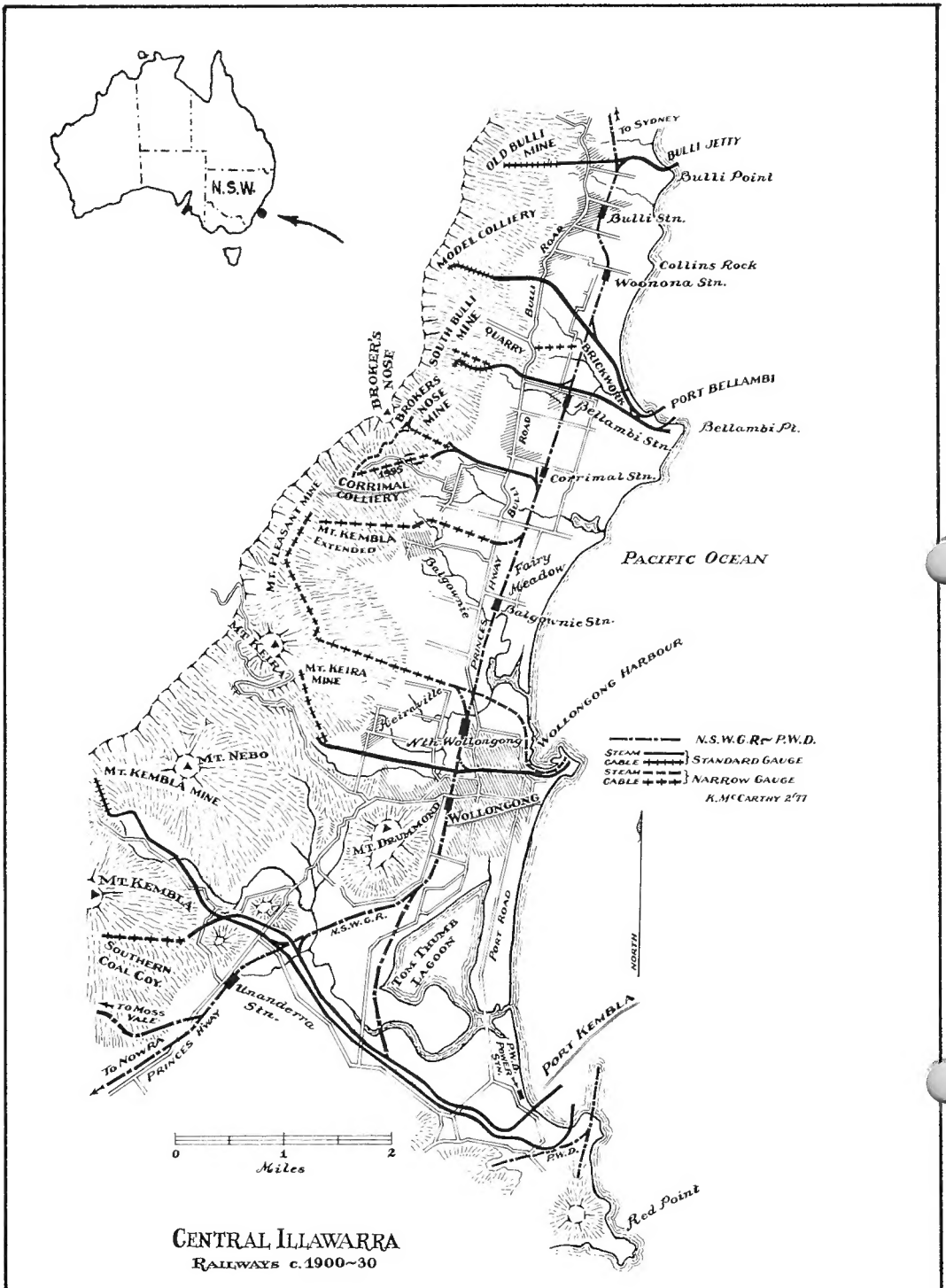
The writer made inspections of the undertaking in 1950, 1951, 1955 and 1964, prior to the ILRMS entry into the picture in 1972. This article was planned to be an account of the efforts since 1972, but so much detail has been recently located on the Corrimal Colliery in the newspaper files of the Wollongong Public Library, that it is felt that these new details and interpretations should also be presented here.

This material is therefore divided into three parts:-

1. The history of the undertaking between 1884 and 1965.
2. Details of the locomotives and their disposal.
3. The re-opening of the line by the ILRMS and its retrieval.

Readers are referred to the ARHS "Bulletins" for January 1946 (no. 99) and January 1947 (no. 231) as well as the excellent account in the book "Transporting the Black Diamond" by the Late G. Eardley, published in 1968. The writer has avoided repeating what appears in these accounts, however, and has based his interpretation on newspaper accounts, mining reports and personal observations.

Some day, when someone prepares a detailed industrial and economic history of the Corrimal Companies, we will perhaps find that the truth lay somewhere in the middle of the interpretations so far advanced on the history of the undertaking.



CENTRAL ILLAWARRA
RAILWAYS c.1900~30

The Corrimal Colliery Railway

by K. McCarthy

Prior to the opening of the isolated Government Railway between Wollongong and Clifton on the N.S.W. South Coast in 1887, its extension to North Kiama later that year, and its connection with the main N.S.W. railway network in 1888, (1) colliery railways already existed in the Illawarra region linking mines in the nearby escarpment with isolated jetties. These linked Mt. Kembla with Port Kembla, Mt. Keira and Mt. Pleasant with Wollongong Harbour, Bellambi and South Bulli collieries with Port Bellambi, Old Bulli with Bulli jetty and North Illawarra mine with a wharf at Point Hicks near Austinmer. The Coal Cliff colliery entrance at that time was a little above high watermark in the cliff face near Clifton, and this faced directly onto a jetty projecting out into the ocean at a location with little protection from any adjacent headland.

During April 1882 (2) the plans of the Illawarra Government Railway survey from Macdonaldtown to Coal Cliff were released, but two months later this project received a set back, as the detailed surveys were destroyed in the Garden Palace Pavilion fire (3) at Macquarie St. Sydney.

By June 1883 construction work on the Illawarra railway was progressing at Bottle Forest (Heathcote) (4) while in January 1884 a start was made on the Illawarra section at Bulli near the rear of Ross's premises. (5) The establishment of the Government line meant that future collieries could be developed in the Wollongong region with smaller capital than required in the past, as such undertakings could feed into the new utility without having to construct jetties and purchase steam colliers to take the coal to the Sydney market by sea.

Corrimal Colliery Opens.

The "Illawarra Mercury" for October 14th, 1884 reported that Captain Osborne, who had major interests in the Mt. Keira colliery, proposed to lease the Balgownie property to a Sydney syndicate for coal mining. The mine would be located at Mount Corrimal or Brooker's Nose, three miles northwards from Wollongong. This lease would be for fifty years' duration and coal would be carried along the proposed NSWGR railway and the Mt. Keira colliery line to Wollongong Harbour for shipment. By July 1885 (6) the Brooker's Nose Coal Coy. was ready to start mining activity.

James Brooker owned a farm near the colliery site and was an Alderman on the first North Illawarra council in January 1869 (7) and the rocky outcrop which dominates the coastal range 1,450 ft above Corrimal was known as Mount Corrimal, then Brooker's Nose and later Broker's Nose. (8) The coal bearing property of 500 acres was secured from Major Owen and D. Griffin, and contained five coal seams and good timber, while an additional 20 acres were purchased between Bulli Road and the surveyed NSWGR route at Corrimal. By December 1885 the colliery had been in operation for almost six months, the 7 ft. seam being worked was reached by a 1,000 ft tunnel driven into the mountain face almost 400 ft above sea level. These initial operations were under the control of Thomas Bertram who employed horse teams to carry the coal along Bulli Road to Wollongong Harbour pending the completion of the Government line.

Towards the close of December 1885 (9) Brooker's farm at Fairymeadow was sold for subdivision. This property extended from Balgownie Lane in the south to the Brooker's Nose Coal Company's tramway in the north. . . . . Thus the 2 ft gauge self acting cable incline and the horse hauled tramway from the mine existed at this early stage. This tramway terminated on the western side of Bulli Road where, during February 1886, coke ovens were being constructed capable of eventually producing 600 tons of coke each week.(10)

The Illawarra Government Railway.

On Tuesday June 21st 1887, the isolated section of the Illawarra Railway between Wollongong and Clifton was opened to mark Queen Victoria's Golden Jubilee. (11) The first government wagons had arrived by sea almost twelve months before (12) and were hauled up the Mt. Keira railway from Wollongong Harbour by that company's locos. As there is no evidence of a physical connection between the Mt. Keira and the Government line until 1889, (13) the rolling stock must have been transferred at the right angle crossing by jacking and slewing. On the opening day, only four carriages were available while the Government loco, which had arrived at Wollongong Harbour on the day before the opening, was not ready for use.

Contractor Logan saved the day by lending his locomotive to work some passenger trains from Wollongong while one of the Mt. Keira colliery locos. was hired by the Government to help with the inauguration operations. This loco was transferred at the level crossing where the Government line crossed the colliery railway. The "Illawarra Mercury" for June 7th 1887 reported that "not less than a dozen men commenced the undertaking (transfer) after tea time (on Saturday 4th June 1887), and kept at it until after midnight, by which time they succeeded in successfully shifting the locomotive from the Mt. Keira railway to

the Government line. The work . . . . had to be done very slowly by means of screw jacks". The Mount Kembla Coal Coy. lent its engine and carriage to operate a service on this gala day southwards from Wollongong on the unfinished section. (14)

Colliery Failure and Re-organization.

The delay in making a connection between the Government line and the Mt. Keira railway to Wollongong Harbour ruined the Brooker's Nose Coal Coy and forced its closure. (15) At the start of 1889 (16) however, the South Bulli and Brooker's Nose Companies were combined and the name changed to Corrimal Colliery. The new undertaking planned to ship coal by rail directly to Sydney, the first through NSWGR train had made the journey on September 17th 1888 while the official opening ceremony was conducted by Governor Lord Carrington on October 3rd 1888.(17)

The physical connection at the Mt. Keira line crossing was surveyed in February 1888 (18) but the private line to the Harbour had to pass to Government control before construction could commence. The purchase Bill passed through the Colonial Parliament between February and December 1889 (19) culminating in its purchase from Captain Osborne for £7,500 in December 1889. (20)

The Southern Coal Company.

The "Illawarra Mercury" for June 21st 1888 announced details of the newly formed Southern Coal Company, established with English capital to extract coal from the southern face of Mt. Kembla behind Unanderra. The coal was to be shipped from a new jetty near the Mt. Kembla Company's structure at Port Kembla. The jetty and standard gauge railway construction was well advanced by November 1888, (21) and mining commenced in January 1889, (22) under the direction of manager H. A Pringle. The mine entrance was located 700 ft above sea level on the southern spur of Mt. Kembla which reaches 1,650 ft above the narrow coastal plain. The tunnel extended into the mountain for 360 yards to tap the 5 ft seam.

One J. Crowder was brought from England by the Southern Coal Company to direct the construction works. The coal left the tunnel mouth by a 1¼ mile long, 2 ft gauge incline on which the skips were gravitated on an endless cable. A standard gauge railway extended from the foot of the incline in a generally eastwards direction for 2½ miles to the Company's jetty at Port Kembla. This steam railway crossed over the Mt. Kembla railway, by a bridge, on reaching the valley of American Creek, and remained parallel and on the north side of the Mt. Kembla railway until Port Kembla was reached. The NSWGR Illawarra railway was crossed by both private lines, about a half mile east from where they intersected each other. The Southern Coal Company laid out a coke making plant consisting initially of 20 ovens, with a capacity of 80 tons per week, on the Port Kembla side of the NSWGR line crossing. This coke business was conducted by the Australian Coke Making Coy. and a steady trade was contracted with industries at Adelaide, Silverton, Port Pirie and Broken Hill.

By November 1889 (23) Corrimal coal was being shipped from the Southern Coal Coy's Port Kembla Jetty, this latter Company's trains had gained a permit to travel over the NSWGR Illawarra railway between Corrimal and Unanderra. The collier "SS Kurrara" received the first load of coal at Port Kembla on November 9th, 1889.

Corrimal Colliery Development.

The fortunes of the Corrimal Colliery had certainly changed for the better, for during November 1889, a contract had been won to provide coal to Eveleigh for the NSWGR. (24)

The "Wollongong Argus" of November 9th 1889 described the Southern Coal Company's jetty at Port Kembla as a two storey structure, located a half mile from the Mt. Kembla Coy's. pier, constructed from turpentine timber. In the light of this co-operation it is without surprise that the "Illawarra Mercury" for January 7th 1890 reported that the Southern Coal Company had purchased the Corrimal Colliery.

The 2 ft gauge Corrimal railway had been extended eastwards in c.1888 (25) to the NSWGR siding at Corrimal, from the former coke ovens terminus at Bulli Rd. The horse haulage of the small skips from the foot of the incline to Corrimal sidings limited the delivery rate of coal from the colliery, so during 1889 work commenced on converting the horse traction portion of the 2 ft gauge line to standard gauge. The "Sydney Mail" for January 4th 1890 reported that the widening of the Corrimal tramway was nearing completion, a large number of men being at work on the project. It continued that "the way is of permanent construction equal to the government railway, to enable Government engines to work the line". . . . "The Company does not intend keeping their own engine." At that stage the mine was producing 120 tons of coal a day for the Eveleigh locomotive depot.

The report continued, that the Broker's Nose colliery was taxed to its fullest extent while the Manager, Mr. W. B. Green, was pushing the improvements forward at a brisk pace. The underground workings were being extended so as to be in readiness for the increased output when the government wagons reach the screens at the foot of the incline. The services of a practical overman holding high credentials from the Indian Government had been secured at that juncture by the colliery management.

The "Sydney Mail" for January 18th 1890 mentioned that the manager of Southern Coal Company had taken possession of the Corrimal Coal Coy. property at Broker's Nose on behalf of his undertaking "who have bought it" and coal would be shipped through Port Kembla.

By May 1890 (26) 60 men were working at the corrimal mine, and at the end of that month (27) government trains were crossing the main road (Bulli Road) to the coalscreens while by mid June 1890, 200 tons of coal per day were being carried away. (28)

"Burra" hauling a train of empty skips back to the mine ("D" on the diagram) August 7th 1950
K. McCarthy photo.

M. Page in his book "Fitted for the Voyage" - Rigby Ltd. (A History of the Adelaide Steamship Coy. 1875-1975) mentioned on page 117 "The directors discussed a suggestion to register the Company as a coal merchant, but for the time being, nothing was done beyond lending £1,000 to the Southern Coal Coy. thus giving us first call on small coal." This undated statement possibly referred to the 1890 period when the Southern Coal Coy. took over the Corrimal Coal Coy. Until the Australian Iron and Steel interests took over the Corrimal undertaking in March 1964 (29) the colliery was spoken of locally as being owned by the Adelaide Steamship Coy. yet all press references refer to it as being under the control of G. S. Yuill & Coy Pty. Ltd. From 1887 (30) George Skelton Yuill was an active representative of the Adelaide Steamship Coy. in N.S.W., this being an extension of his earlier business of General Manager of the Orient Line of Steamships in Australia. (31) G. S. Yuill continued to be active in the Adelaide Steamship Coy. matters for the rest of his business life, being a member of its Board of Directors from 1890 to 1902. It seems, therefore, that the Corrimal mine can be considered as being under the control of both G. S. Yuill and the Adelaide Steamship Coy. as the corporate interests of both seemed to be interwoven.

The Decline of the Southern Coal Coy - Unanderra.

Local reports suggest that the Mt. Kembla colliery of the Southern Coal Coy. was a commercial failure, but it is difficult to ascertain just when operations ceased at that location. The "Illawarra Mercury" for October 28th, 1899 reviewed the Government proposals for the development of Port Kembla as a general harbour and revealed that the Southern Coal Comapny would receive £33,000, the Mount Kembla Coal Coy. £17,500 and the Wentworth Estate £5,000 in compensation."

In view of the State Government proposals to develop Port Kembla as a major port, the Public Works Dept. took over the Mt. Kembla Coy pier (No. 1) and the southern Coal Coy's jetty (No. 2) in 1902 but allowed both undertakings to lease back their former properties. (32) The Southern Coal Coy. lease expired in 1905 and from January 1st 1906 the North Bulli Coal Coy., which operated a colliery north of Wollongong at Coledale, took over the wharf.

During 1911 the Government announced that the PWD would take over all jetties and harbour works at Port Kembla in the near future, (33) this occurred in July 1912. One interesting loco taken over by the PWD was Sydney steam tram motor No. 69, used by the Nth Bulli Coy. for shunting on the former South-

ern Coal Coy's. jetty from 1907. This later became No. 33 in the PWD roster after 1916.

Contemporary reports indicate that most of the haulage of Corrimal coal from the screens to Unanderra was carried out by NSWGR locos, during the early 1890's, but by the middle of the decade the Southern Coal Coys locos were carrying out this task. In 1897 a large 0-6-0 tender loco. No. 18, was purchased from the NSWGR (34) and this handled the bulk of the haulage between Corrimal and Port Kembla until 1937.

By June 1912 (35) the old Southern Coal Coy's No.2 jetty at Port Kembla was closed through want of repair, the government felt that it was beyond its economic life.

When the Southern Coal Coy lost access to its pier in 1905, a physical connection was constructed at the Unanderra coke works onto the Mt. Kembla railway to enable the Corrimal coal to be shipped from the number 1 jetty at Port Kembla. Wollongong Harbour, Port Bellambi and Bulli jetty were also used to ship out Corrimal coal, photos exist of the Southern Coal Company hoppers at these locations.

During the early years of the century a street tramway movement was strong in Wollongong and although the State Tramway Advisory Committee visited Wollongong in May 1911 to receive deputations on the matter (36) and PWD surveyor McGowan surveyed the northern part of the proposed network between Wollongong and Thirroul in February 1912 (37) the Government rejected the proposals in August 1912 (38) The tramway network was to consist of a trunk north-south route from Thirroul to Port Kembla, with local branches at Bulli and Corrimal, while a cross town line was to link Wollongong Beach with Mount Keira Road, and a circular line would loop from the trunk route from North Wollongong, sweeping westwards through Keiraville then on to Balgownie to rejoin the Bulli Road line north of Fairymeadow.

On rejecting these tramway proposals in 1912 (39) the railway Commissioner suggested that passenger train services on the existing railway could be strengthened and the South Coal Coy. railway between Unanderra and Port Kembla should be purchased for £33,000 to enable the NSWGR to gain access to Port Kembla. The "Illawarra Mercury" for October 18th 1912 stated that the government had taken over this part of the colliery railway. In March 1915 (40) the same newspaper mentioned that the scheme to upgrade the Southern Coal Coys. railway between Unanderra and Port Kembla was to be abandoned and a new railway would be constructed direct from Wollongong to Port Kembla skirting the western shore of Tom Thumb Lagoon. This, the present railway, was 2 miles 66 chains in length and the first trials were conducted on July 31st 1916. (41) The Southern Coal Coy's. tracks east of Unanderra were lifted and the connection at Mount Kembla junction removed on June 16th 1917. (42)

Soon after the completion of the Illawarra railway in 1893, local interest developed in a link line between the Illawarra district and the Southern Highlands. When C. H. Hoskins announced plans in April 1921 for the establishment of a steel works at Port Kembla to replace the Lithgow works, he stated that a railway would be required linking Port Kembla with Bargo to tap his limestone deposits in that area.

Surveys commenced in July 1921 (43) for this cross country link line, and the Wollongong Chamber of Commerce was moved to contribute £500 to aid the task.

In September 1921 (44) a news release stated that the Port Kembla to Moss Vale line would leave the Southern Coal Company's railway at its western terminus in the foothills of Mt. Kembla then climb towards Macquarie Pass. This route was not adopted, however, and this is the last time the Southern Coal Coy's. railway appeared in the press. On October 7th 1921, the "Illawarra Mercury" announced that a railway route between Port Kembla and Moss Vale had been found with a ruling grade of 1 in 36 against westbound traffic and 1 in 60 against coast bound trains.

Corrimal - Balgownie Mine.

Until 1906, the Corrimal coal was extracted through several tunnels at the top of the self acting incline under Broker's Nose. In 1906 (45) a 91ft uplift was reached in the seam at Broker's Nose. To overcome this fault G. S. Yuill & Coy Pty. Ltd. opened a new entrance one mile to the south of the top of the incline again approximately 400 feet above sea level. The "South Coast Times" for December 8th 1906 reported that a short railway had been built under Broker's Nose to a new tunnel above Balgownie, "which will be called the Corrimal - Balgownie Colliery." This connects with the Government line, so the report continued, by endless rope haulage way while four locos are available (on the standard gauge railway) to haul the coal to Port Kembla, Wollongong Harbour, Bellambi or Bulli for shipment, but small coal is sent to the Australian Coke Making Coy. at Unanderra for coke manufacture. At that stage a work force of 350 men were mining 500 tons per day.

This extension of the Corrimal railway for one mile southwards along the 400 ft contour must have been worked by horses until 1908 when the first 2 ft gauge steam loco was obtained by the colliery.

Corrimal Coke Ovens.

Thomas Bertram's original coke ovens at Bulli Rd. Corrimal were out of use by 1890 as the Southern Coal Coy. carried out all its coking activities at the Unanderra coke works. This subsidiary company announced that their Unanderra coke ovens, which contained 54 furnaces at that stage and a capacity of 300-400 tons per week, would be closed in November 1896 (46) throwing 40 employees out of work. The trade depression of the 1890's made it difficult to find markets for the coke, but the "Wollongong Argus" for April 8th 1899 reported that the Unanderra coke works were again working to capacity, while the same newspaper, of December 2nd 1899, mentioned that

coke works were being erected at Port Kembla by the Mt. Lyell Coy.

With the loss of the Port Kembla Jetty and the abandonment of the connecting railway, as well as the economic failure of its Mt. Kembla mine, the Southern Coal Coy. took the last step of withdrawal from Unanderra when excavations for a coke works near Corrimal station commenced early in 1911. (47) The coke works were completed in May 1912 (48) and during September G. S. Yuill and Coy. performed the official opening ceremony at Corrimal and announced intentions of using the waste gases to heat the boilers of a power house to be erected nearby.

During the 1920's, as Port Kembla progressed from a coal handling port to a major industrial centre, the pioneer facilities were gradually demolished by the PWD. During December 1924 (49) the old Southern Coal Coy. jetty (Pt. Kembla No. 2) which had stood disused for twelve years was dismantled to make room for a new facility to be built by Hoskins for the steel works.

Electricity Generation.

On December 23rd 1864 the "Illawarra Mercury" mentioned that Benjamin Fawcett was erecting a gas works in Corrimal Street, Wollongong, while on January 31st 1865, the same paper reported that a meeting had been held in Wollongong to form a gas company. Nothing further is recorded on this venture until May 1881 (50) when another meeting was held to form a gas company, and on this occasion the movement met with success. Tenders were called in August 1882 (51) for the erection of a gas works at Charlotte St. Wollongong, adjacent to the Mt. Keira Coal railway (52) while in October 1882 an iron foundry had been established next to the gas works site and it was busy making wagon wheels, fire grates and verandah posts. On August 20th 1883 Wollongong was lighted with gas for the first time when Captain Owen lit the first public light at the corner of Keira and Smith Streets. (53)

On Saturday February 3rd 1912 the Mayor of Wollongong, Alderman W. Wiseman, switched on the electric current, from a balcony of the Commercial Hotel on the corner of Crown and Church Streets, Wollongong, provided by a small private Christensen plant installed to light the business area only. This consisted of a double cylinder steam engine of 56hp driving a 110 volt generator. (54) This did not prove a threat to the local gas company, but the erection of the large PWD power station at Port Kembla in 1913 (55) enabled electricity to be eventually reticulated to Wollongong southwards down the coast and to the Highlands towns.

Standard gauge, 0-6-0 CCC1 heading towards the exchange sidings at Corrimal c.1963 with loaded coal waggons.

P. Neve Photo.

During March 1919 (56) the Wollongong Council investigated the possibility of purchasing power in bulk from the PWD for distribution throughout its municipal area. This project progressed to the stage of calling tenders in September 1920 (57) while the "Illawarra Mercury" reported on the official "switching-on" ceremony from the Wollongong Town Hall, in its issue of November 4th 1921. Electricity replaced gas-lights in the city streets while the conversion of public places followed. (58)

Electricity reached the North Illawarra council area (North of Wollongong) on Friday July 17th 1925 when Mrs. H. Pettingell, the Mayoress, switched on the current at the Town Hall at Fairymeadow. This was supplied to the council by the Corrimal Balgownie Coal Coy. from the Corrimal power house, and over 400 street lamps were supplied initially. (59) This contrasted with the 12 gas lamps installed in public streets around Wollongong in 1883. (60)

The coke business continued to be a commercial success for the Corrimal Company while the waste gases were placed to good use firing the power house boilers. The Mt. Lyell coke works at Port Kembla, however, were demolished by the start of September 1926, as the coke needs for that Tasmanian Coy. had greatly diminished with the development of the Tasmanian hydro-electricity system. (61)

During 1947 four of the Illawarra municipal areas combined to form the city of Greater Wollongong and in December 1948 (62) the new City Council announced that it would purchase the Corrimal Coal and Coke Coy's. electricity franchise to the North Illawarra area for £30,000. A visit to the power house in August 1950 revealed that the power house was still feeding in to the Wollongong Council lines but at that stage the Corrimal power station no longer supplied its own mine, the pit having been transferred to mains supplied from the Port Kembla PWD station.

New incline installed.

Throughout the life of the 2 ft gauge line along the 400 ft contour the Company experienced trouble with washaways and land slides in this steep, high rainfall area. Over the years, landslide material and coal screenings were used to fill the gullies and ravines enabling many of the curves between the spurs to be straightened. One large land slip occurred after a period of heavy rainfall in January 1918 when the face of Broker's Nose collapsed, causing a noise heard throughout the district and altering the shape of this prominent physical feature. (63)

The laborious system of hauling Corrimal coal along the 1 mile, 2 ft gauge steam railway, followed by the 2 ft gauge self acting incline, then along the Company's standard gauge tracks to Corrimal station continued until the close in 1955. On a visit to the undertaking in September 1955 a new incline was noted in position, and the condition of the cars and tracks indicated that the facility had been in operation. The incline was built to a gauge of 3 ft 6 ins and replaced the 2 ft gauge steam railway and incline.

The standard gauge terminus was extended, passed the old screens, to a new coal washing plant at the foot of the new incline.

End of the Corrimal Coal Coy. and Closure of the Railway

By early 1957 the old incline had been dismantled, but the old 2 ft gauge steam railway was still in limited use. Between 1908 and 1965 four steam locos had been employed on the 2 ft gauge line, while a total of five steam locos had been owned by the Company between 1890 and 1965 to work the standard gauge services.

After the closure of the 2 ft gauge incline the sidings at the now deserted northern end of the 2 ft gauge steam line were used for skip storage, while ovens at that location heated sand for the mine locos. By March 1964 the tracks were overgrown and land slips had left the rails suspended in mid air in two locations. Two narrow gauge steam locos were in the mine yard siding, one being used occasionally to shunt skips around the yard. Disused skips had been shunted progressively out of the mine yard into the narrow gauge main line until a derailment had caused them to choke a cutting.

The Australian Iron and Steel Colliery interests took over the Corrimal Colliery in March 1964 (64) and by connecting the workings to the Memira tunnel was able to close the railway in 1965.

The Bulli Road (Princes Highway) crossing was tarred over in February 1966, while the bulk of the rails east of that crossing were lifted in November 1968. Small segments of the rest of the standard gauge tracks were removed from time to time, the long straight west of the Princes Highway crossing was bulldozed during 1974 to enable the property to be subdivided, while the last sections of rail at the foot of the old incline were cleared at the same time. Throughout 1974 and into 1975 the tracks laid between the old and new incline base during 1955 were gradually taken up and on October 29th 1975 a wood standard gauge hopper wagon and a 3 ft 6 in gauge four wheel coal bin, were transferred from Corrimal to the Albion Park museum of the Illawarra Light Railway Museum Society for restoration and preservation. The standard gauge hopper is the property of the NSW Division of the Australian Railway Historical Society.

Details of the disposal of the standard gauge and narrow gauge steam locos are presented in a later section of this paper together with the saga of the re-opening and retrieval of the rails from the 2 ft gauge line in the early 1970's by the Illawarra Light Railway Museum Society.

3 ft Gauge Railway.

All contemporary historical treatments of the Corrimal undertaking have ignored another short, but interesting railway operated by the colliery. This was a horse worked, 3 ft gauge line, about 70 yards in length which carried rubbish from the screens at the foot of the old incline for dumping over a bank south of the operations area. The 3 ft gauge tracks crossed

one 2 ft gauge line and two standard gauge sidings on the level, east of the screens, one such crossing was still in situ. covered by undergrowth in April 1968.

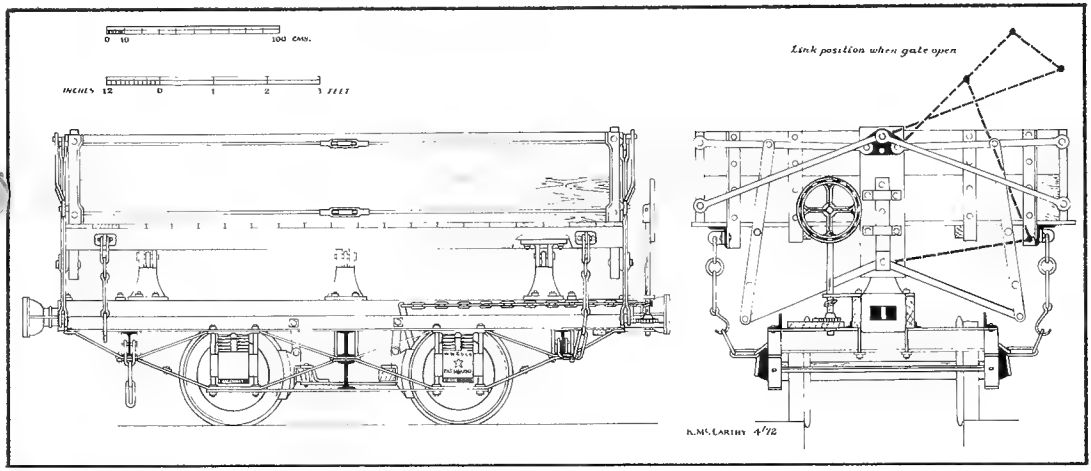
The one piece of rolling stock on the line was a side tip wagon, built by the Western Wheel and Scraper Coy. of Aurora Illinois, U.S.A., the axle box cover bearing the patent date of March 1910. Enquiries made about this wagon in 1950 could not clear up its origin except that it arrived "during the 1930's."

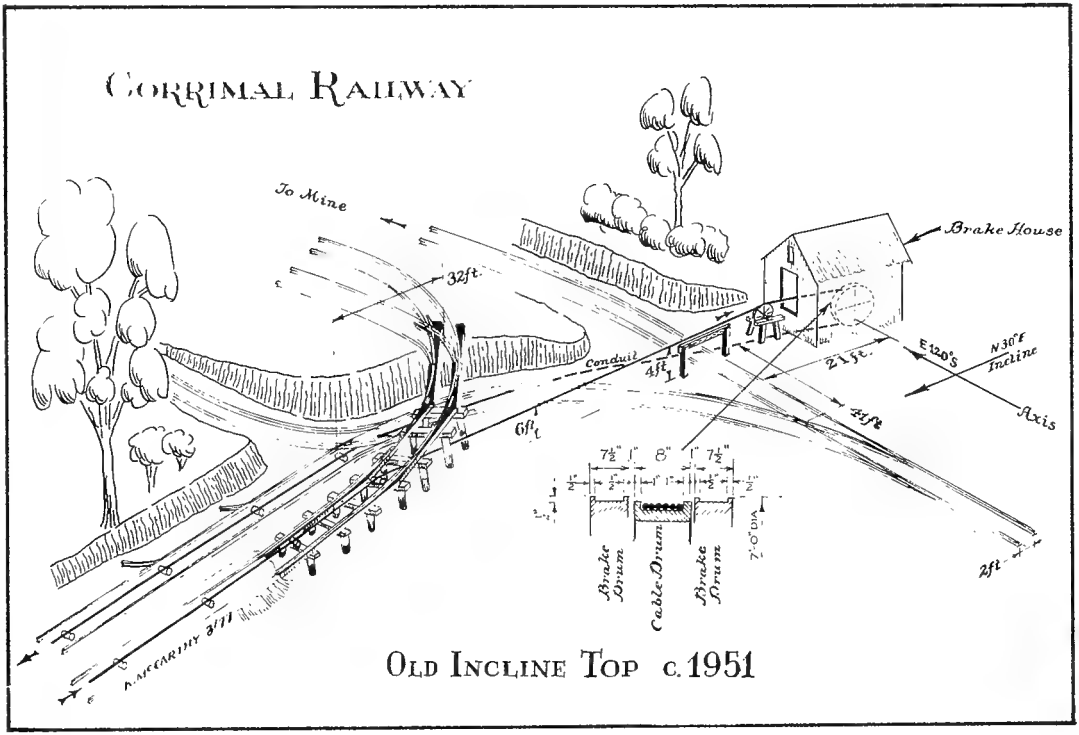
Two known 3 ft gauge railways operated in N.S.W. using PWD steam locos were located at the Hume Weir near Albury and on Walsh Island at Newcastle. Walsh Island Dockyard closed in 1933, a victim of the Trade Depression of that era, while the Hume Weir (stage 1) was completed in 1936. "Light Railways" - Autumn 1968 edition, featured an article on the Hume Weir construction including photos of these "Western Wheel and Scraper Coy." wagons on 3 ft gauge track. This then could be the source of the Corrimal vehicle.

After 1955 the 3 ft gauge side tipper was abandoned and eventually came to rest at the foot of its tipping embankment. The retrieval of this relic was the first project of the Illawarra Light Railway Museum Society when it was dug out of the coal dump on March 12th 1972, and transported away to that group's store site on March 18th together with the two crossing gates and the semaphore signal from the level crossing site of the Corrimal Railway at the Princes Highway.

Retrieval of "Western Wheel and Scrapper Coy." 3ft gauge side tip waggon at the foot of the old Corrimal incline, March 12th, 1972.
K. McCarthy Photo.

Drawing of waggon made from measurements taken from remains of dump waggon.





The Inclines – 1. The Old Incline.

The single track 2 ft gauge main line of the steam railway branched into two main sidings at the top of the old incline, but no loco run around facilities were provided. The loco would be uncoupled from the loaded train of skips before the points near the water tank were reached, and the loco would then steam ahead on the eastern track to the tank. The loaded skips would then be gravitated towards the incline top along the left hand, or western track at the sidings. Horses were on hand to assist in this task. Skips waiting to descend the incline were taken to the extreme northern end of the sidings and then reversed and attached to the cable on the incline in batches of one, or two coupled vehicles, by "fisher clips". The incline was self acting in such a way that the descending loaded skips hauled up the empty ones, while the power generated was "taken off" the terminal sheaves to operate the screens at the base of the incline.

This old incline worked to the "right hand rule", the descending traffic used the southern track and the ascending wagons the northern one. The clips were basically a tweezer shaped device encircled with a ring, and attached to a chain which would be attached to the coupling hooks on the skips. A gang was engaged on the incline to clip the wagons onto the cable, a hammer being used to knock the ring down the jaws to engage the "rope". A tripping device disengaged the jaws at each end of the incline, but the writer well remembers men provided with hammers at these locations to help these devices if the clips were not released in time.

At the foot of the incline the skips were tipped and the coal advanced to the screens and loading hopper bins over the standard gauge sidings. The empty skips moved down a steep inclined track, steadied by a toothed chain between the rails, to a reversal siding from where they could be shunted back and clipped onto the upwards cable. This reversal siding progressed eastwards for some 80 yards parallel to the standard gauge tracks where pit props and other timber sections, stores and fodder could be directly transhipped or loaded from the nearby timber stack yard, into 2 ft gauge flat trucks with steel pin sides.

At the top of the old incline the ascending empty skips crossed the downwards line on the flyover, where they were unclipped and wheeled to the waiting narrow gauge loco on the eastern siding at the water tank. Defective skips were removed onto a minor repair siding at the top of the incline.

The cable tensioning gear was situated at the foot of the incline, but the brake drum stood in a shed at the top. This consisted of a cable drum, almost 6 ft in diameter and two brake drums, and although now free from its bearings, it still lies in the brake house

pit, overgrown with lantana. The incline speed was controlled by two large wooden brake blocks applied and released by screw gear. The brakesman sat at this wheel and continually wound on and off the brakes when the incline was in operation. When visited in 1950 and 1951 the writer was struck by the pungent, but not unpleasant smell of the hot brake blocks cooled by a trickle of water, and the noise, similar to a hemp rope slipping on a ferry bollard, as the cable coils slipped along the return drum.

The operator remarked that the tendency to gaze at the revolving drum had to be avoided as a hypnotic state would be brought about which made the wheel seem to rise before you.

The skips, of ¾ ton capacity, were usually made up into rakes of 30 for steam haulage between the mine entrance and the incline. Although the grade was generally in favour of the load, there were some slight adverse sections and to prevent these loose coupled, unbraked skips from snatching, one wheel on approximately every 8th skip was spragged for the one mile journey. Although hard on the tracks and wheels, this additional friction kept the train under control. The majority of the Corrimal skips were of wooden construction with steel corner and edge strips, but by 1950 a small amount of similar vehicles with RSJ and channel steel underframes and flat plate steel welded boxes were in use.

By the early 1960's two other types of metal box skips were at Corrimal, possibly obtained from the nearby Excelsior Colliery. One style carried thick pressed steel bodies with two strengthening ribs, while the other type was constructed from corrugated plate steel, ingeniously fastened at the corners by a ½" diameter rod dropped down through holes at each corner where the corrugations overlapped. This last style carried builders plates bearing:-

"Robt. Morris Ltd - Engineers. Farnworth Lancs.
Pat. Nos. 11364/11 and 10303/12"

Some of these skips were fitted with "hungry boards" around the tops to increase the capacity to that of the standard Corrimal skips.

The foot of the old 2ft gauge incline at Corrimal Sept. 4th 1951. The clip used to fasten the skips to the cable can be clearly seen in this photo. *B. parle photo.*

2. The New Incline.

The second incline, built to a gauge of 3 ft 6 ins, was first observed by the writer on September 17th 1955, and as mentioned, there was every indication that it had been in use prior to that date, but perhaps only for trial operations. Unlike the old incline which was built to a fairly constant grade, the new one was almost level for the first quarter, steeply graded for the second quarter from the bottom, then slightly graded for the third quarter, with the final steep approach to the mine entrance.

This incline was constructed with double track, as it worked on the funicular system, where they cars on each track were coupled together to form a small train and each train was attached to the end of the cable, so that when one train on the north track was at the top, the other train on the south track, was at the bottom. The track centres were very close, with only 1 ft 6 ins between the inner rails.

The two tracksets bulged outwards to form a passing loop half way up the incline which was immediately under the main access road bridge leading to the mine. A second such bulge was located about 100 yards before the lower terminus at the washery, but this was not a passing place but a safety deviation where runaway cars would be derailed if not under control.

Although this incline functioned "end to end" on the cable, the cable continued right around the system as it it was endless, the reason for this has not yet been ascertained. The only explanation offered is that the energy generated on this self acting incline was "taken off" the cable at the lower end to operate machinery in the washery building.

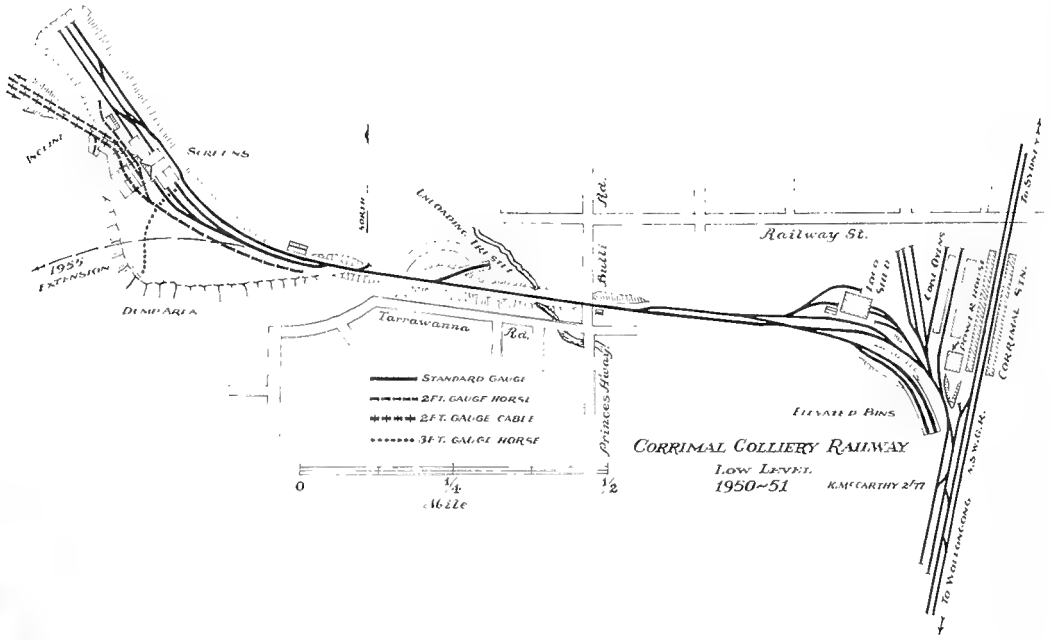
A maximum of four 15 ton cars could be in use on the incline at the one time, two coupled together going upwards, while two full ones would proceed coupled down hill.

The operation of the two inclines was complicated, especially the extensive manual operations associated with the first incline. But practice develops efficiency, and the many manual steps carried out in the operation of the original incline seemed to be undertaken with clocklike-mechanical regularity.

During the earlier years 500 to 600 tons of coal were mined at Corrimal each day. If this quota was maintained for the entire life of the 2 ft gauge working between 1906 and 1955 almost 7 million tons would have been hauled along the narrow gauge railway and lowered down the old incline. This is a glowing reference to the workmen who operated the railway, as it was only their hard work and perseverence which enabled the relic to continue operation into these recent times.

The new 3'6" gauge incline at Corrimal Colliery, 17th Sept. 1955. Taken from the road bridge at the half way passing loop, looking east.

K. McCarthy photo.



Corrimal Colliery Steam Locomotives.

From the time of its establishment, until the closure in 1965, the Corrimal Colliery (and Southern Coal Company) owned a total of five standard gauge locomotives and four 2 ft. gauge engines, for use on the surface tracks. Since 1965 the coal has been transported underground from the Corrimal workings through the Kemira tunnel, which enables direct loading into A.I. & S. trains near Mount Kembla from where it is carried direct in that company's standard gauge trains to the steel works at Port Kembla without traversing NSWGR tracks.

The main aim of this treatment is to present new details of the narrow gauge railway operations, but items relevant to the standard gauge section have to be presented here to make the account more meaningful. Very little new evidence of the standard gauge locomotives has been discovered, so the account presented here is merely a tabulation of more thorough writings released over the last thirty years. (65)

It should be noted that the Corrimal Coy. hired NSWGR locomotives for use on the mine railway during periods of motive power shortages.

1. Standard Gauge locomotives.

No. 1 0-6-0 side tank. Outside cylinders. Yorkshire Engine Company. Builder's No. 428 of 1888.

Built for the Southern Coal Coy. for their Port Kembla-Unanderra-Mt. Kembla railway. Used on Corrimal traffic after 1890, sometimes hauling coal trains along the NSWGR between Bulli to the north and Port Kembla to the south. Scrapped 1964.

No. 2 0-6-0 side tank. Outside cylinders. Yorkshire Engine Company. Builder's No. 429 of 1888.

Identical to loco No.1. Same details, but scrapped in 1965.

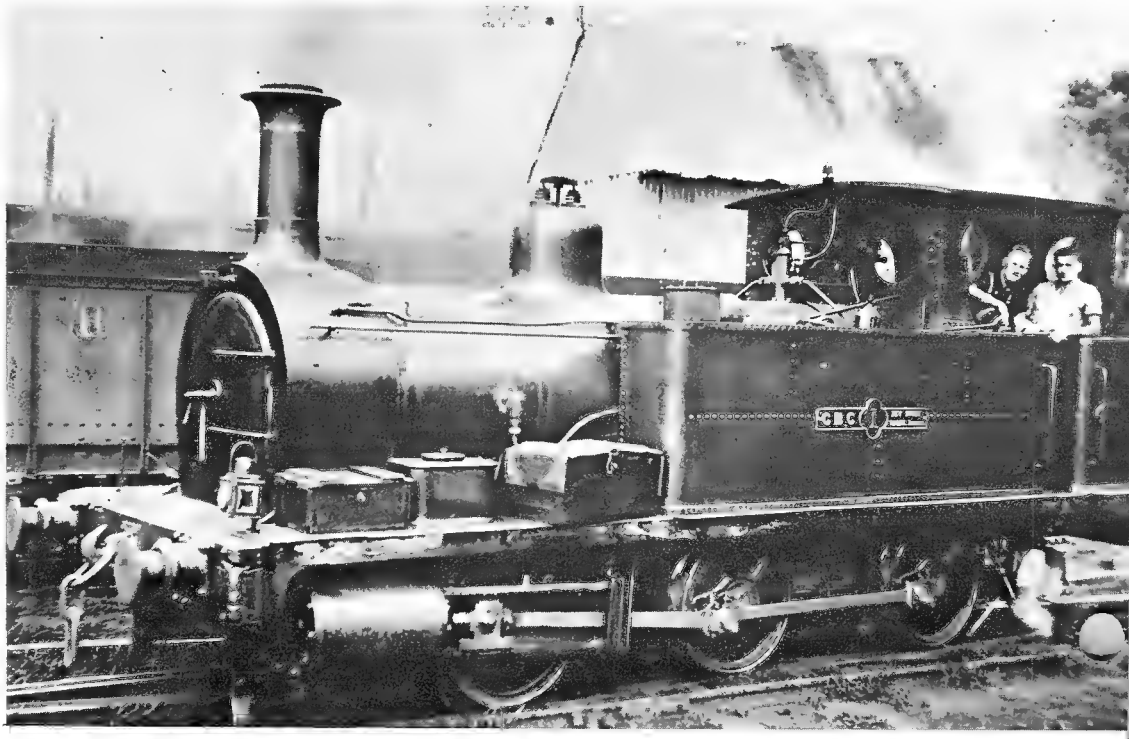
No. 3 0-6-0 saddle tank. Outside cylinders. The Vulcan Foundry Coy. Ltd. of Newton -le-Willow, England. Builder's No. 794 of 1876.

Bought by the Southern Coal Coy. from contractor Fishburn by 1898 for shunting their Port Kembla jetty. Sold to the PWD (Public Works Dept.) in 1910 for breakwater and jetty work at Port Kembla, later renumbered PWD No. 32. Sold c.1917.

No. 18 0-6-0 tender loco. Inside cylinders. Robert Stephenson, England. Builder's No. 1542 of 1864.

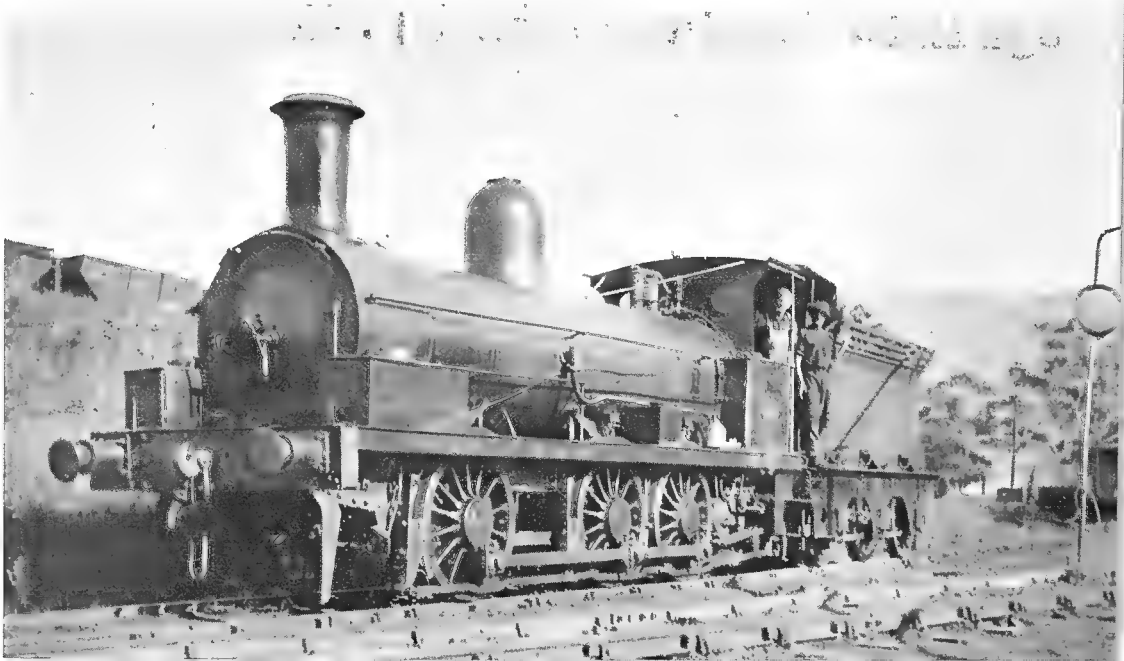
Entered service on the NSWGR as their No. 18 during September 1866. Sold to the Southern Coal Coy. March 1897. Used on Corrimal traffic, particularly to Bulli jetty, Wollongong Harbour, Port Bellambi and Port Kembla. Out of service at Corrimal c.1960, boiler lifted from frame for major overhaul, but not carried out. Obtained from A. I. & S. Coy. by the N.S.W. Rail Transport Museum, taken to ChulloraRailway Workshops in well wagons on Sept. 18th 1964. Restored to static display condition and hauled to Petersham store site on October 29th 1965. Now on display at the R.T.M. Museum at Thirlmere N.S.W.

Retained number 18 at Corrimal.



Standard gauge 0-6-0T No.1 Yorkshire Bn 428/1888 at Corrimal 1934 showing the "CBC-1-New South Wales Limited" plate on side tank.
PTC NSW - Archives Photo.

Standard gauge 0-6-0 No.18 R. Stephenson Bn 1542/1864 at Corrimal Sidings in 1934.
PTC NSW - Archives Photo.

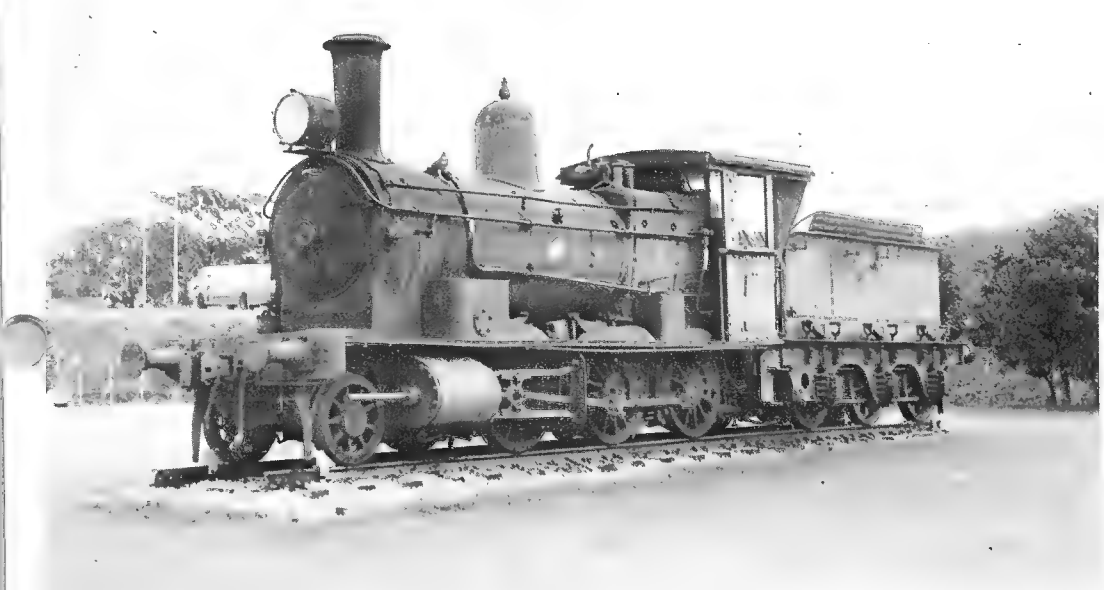


Standard gauge 2-6-0 No.25 at work, Corrimal c1963.
P. Neve Photo.

No. 25 2-6-0 tender loco. Outside cylinders. Beyer Peacock England. Builder's No. 2322 of 1884.

Entered service on the NSWGR as No. 235. To Corrimal Colliery railway in March 1961 bearing number 2535. Renumbered 25 at Corrimal and after the A. I. & S. takeover in 1964 this loco was transferred to

Former Corrimal railway standard gauge loco No. 25, ex NSWGR 2535 at the Steel Works Visitors' Centre. June 24th 1972.
K. McCarthy photo.



their Old Bulli Colliery railway on April 22nd, 1965. The loco and tender were transported to the Port Kembla Steel Works' Visitors' Centre on two separate low loader trucks for display on February 29th, 1972. Sold to the Hunter Valley Steam Railway and Museum group as the Steel Works executives decided that this loco was not representative of their plant during the steam era so could not justify high cost of outside display maintenance. Loco and tender transported away from the Port Kembla Centre on November 2nd, 1976.

2. Narrow Gauge (2 ft Gauge) Locomotives.

Krauss Loco (First)

0-4-0 well tank. Outside cylinders. 160mm diam. x 300 mm, 6 3/8" x 12"
Krauss Locomotive Factory. Builder's No. 2589 of 1892.

Working pressure	= 176 lbs/sq. in
Tractive force	= 1,740 lbs.
Heating surface	= 109 sq. ft
Grate area	= 2. ¾ sq. ft
Capacity of tanks	= 100 gallons
Bunker capacity	= 8¼ bushels.
Working weight	= 6.5 tons

(From T.G.R. records)

Imported into Australia by agents Bloomfield Brothers of Melbourne. (66) From 1893 until 1906 the loco was based at Zeehan in Western Tasmania. It became "H2" in the Tasmanian Government Railway roster. Sister loco No. "H1" joined the Tasmania Government Railways in 1897 (67) so it is doubtful if "H2" would have been in Government service prior to this date.

The 18 mile, 2 ft gauge line between Zeehan and Williamsford, known as the North East Dundas Tramway, was opened in 1898 and Krauss "H2" worked on this system. The main line traffic out of Zeehan was hauled by three class "G" Sharp Stewart locos (No. "G1" of 1896, "G2" of 1898 and 2nd "G1" of 1900.) (68) In 1901 a "Hagan's Patent Loco" of 0-6-4-0T wheel arrangement was added (69) to the main line roster, while the world's first Garratts, 0-4-0 + 0-4-0 No. "K1" and "K2" were purchased in 1909.(70)

With such a fine collection of main line locomotives on this 2 ft gauge system it is no wonder that "H2" arrived in Melbourne during 1906 to work for the Victorian PWD, a regular employer of Krauss locomotives at that stage. "Light Railways" No. 27 (Autumn 1969 issue) mentioned that Krauss locos returned to the Victoria Dock area in Melbourne during 1906 when the Coode Canal was widened, so it is possible that "H2" was used on this project.

Krauss "H2" appeared at Corrimal by 1908 (71) to work the 1 mile, 2 ft gauge railway linking the top of the incline with the new mine entrance. This engine was out of active use by 1933 and by the later 1940's was standing derelict in the Corrimal mine yard. The present writer last observed this loco in 1951 and contemporary reports indicate that it was cut up by 1956. (72)

When the Illawarra Light Railway Museum Society received permission to re-open and retrieve the 2 ft gauge rails at Corrimal, authority was also granted to collect locomotive parts discovered along the right of way.

One pair of driving wheels, the boiler barrel, cab parts, sand box, some frame components and one cylinder and steam chest were rescued from an industrial tip north of the mine yard. Another driving wheel, cut from the axle was found half way along the 2 ft gauge main line, but little hope was held of finding any further major items from this old locomotive. By pure chance the other cylinder-steam chest set as well as buffer beams were discovered at the base of a steep drop, 200 yards from the railway, overgrown with lantana about a quarter mile north of the mine tip. Unfortunately the fourth driving wheel has not yet appeared in the mine railway area. These scattered parts were discovered between August 1972 and October 1973.

These parts have now been stored away and one day, when other more urgent projects are completed, these items may again be assembled, and with many new pieces "H2" may again sit on a 2 ft gauge track.

Krauss Loco (Second)

0-4-0 well tank. Outside cylinders. 180mm diam. x 300 mm, 7" x 12"
Krauss Locomotive Factory. Builder's No. 6927 of 1914.

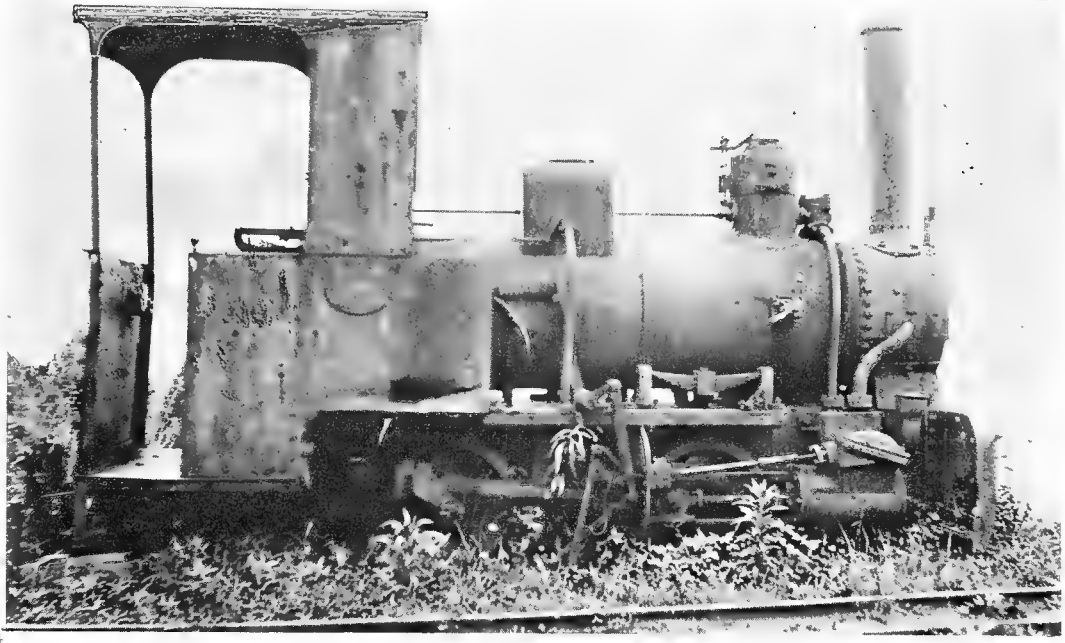
The smokebox door of this loco opened the opposite way to the standard Krauss product.

This loco was bought new by the Corrimal Colliery and is reputed to be the last Krauss locomotive imported into Australia by Kiercks and Son. of Melbourne. (73)

It operated on the Corrimal railway until c.1944 when the arrival of the Robert Hudson-Hudswell Clarke engine enabled it to be withdrawn from active use. Around 1948 this Krauss locomtoive was shunted onto a siding just north of the major bridge near the colliery yard and when first viewed by the writer in August 1950, the siding points had been removed. At this juncture land slip had caused the engine to lean precariously at 45° to the horizontal. Twelve months later it had tipped further and only 30° remained before it would be completely on its side.

By 1964 this unit presented a sorry appearance as it had completed turned over and slipped almost 40 feet down the hill side towards the mine entrance roadway. During this time vital parts had been salvaged while the cab and boiler had suffered under the ravishes of the weather and scrap seekers.

On December 16th 1971 the underframe was ob-

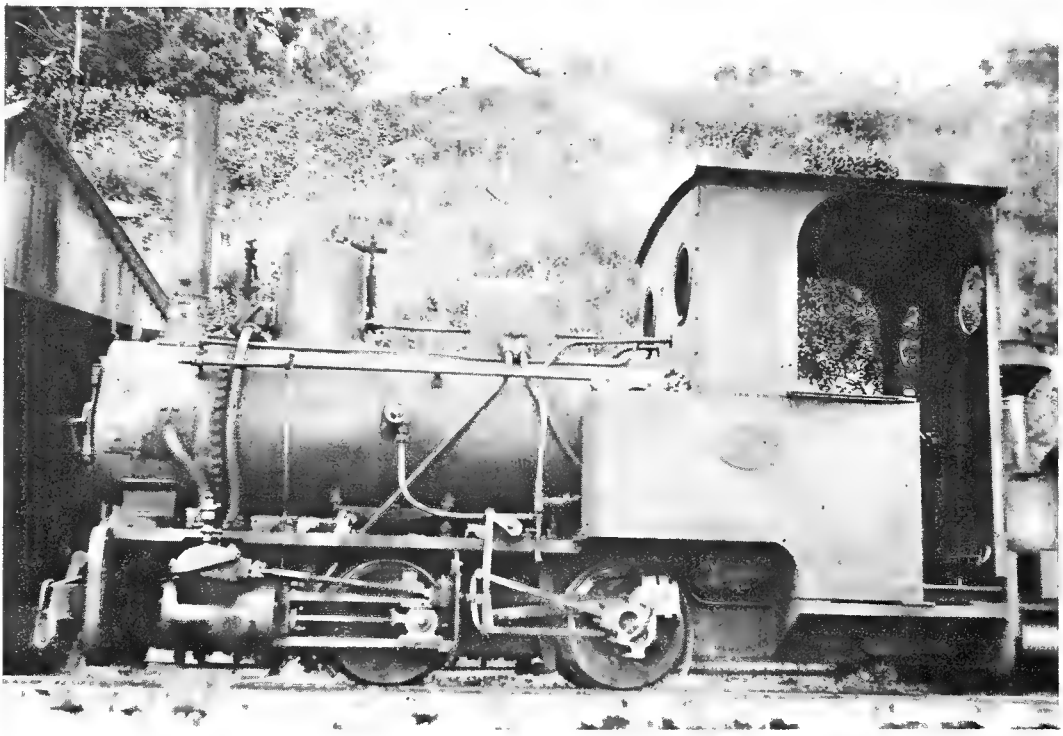


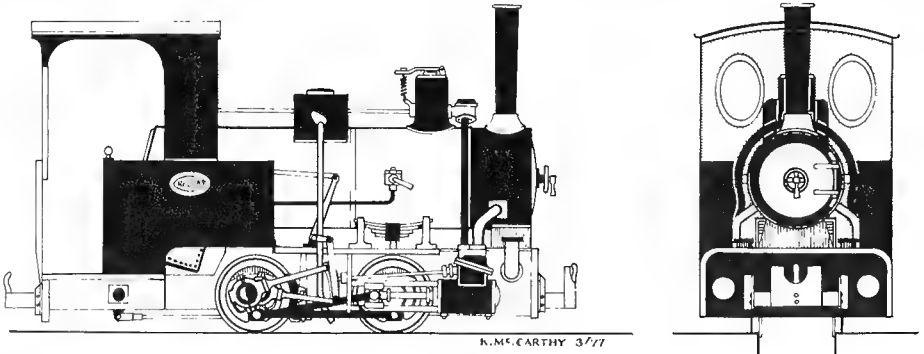
2 ft gauge 0-4-0 WT KRAUSS Bn 2589/1892, derelict near mine yard at Corrimal c.1934.

PTC NSW - Archives Photo.

2ft gauge 0-4-0WT KRAUSS Bn 6927/1914 resting near the Loco Shed c.1934.

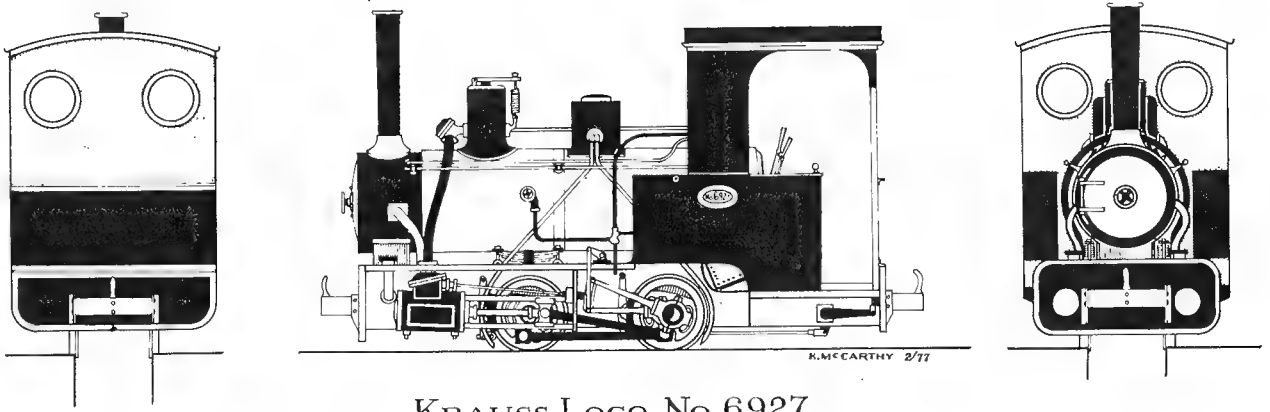
PTC NSW - Archives Photo.





KRAUSS LOCO. No. 2589

Scale 0 1 2 3 4 5 6 7 8 Feet

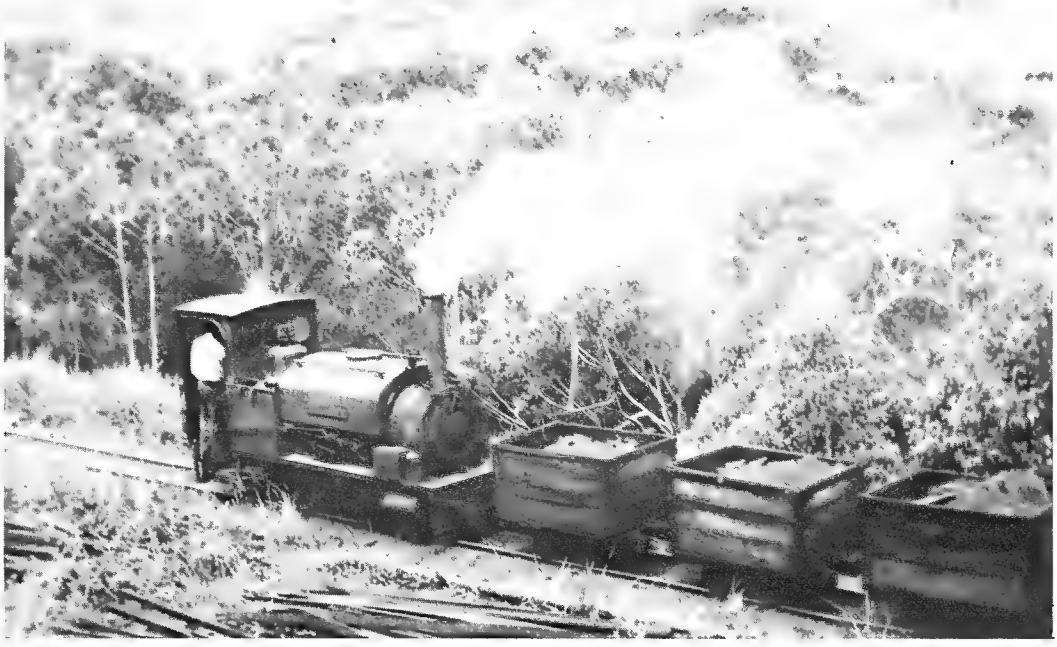


KRAUSS LOCO. No. 6927

Scale 0 1 2 3 4 5 6 7 8 Feet.

The Robert Hudson-Hudswell Clarke 2 ft gauge loco shunting at the Corrimal mine yard. August 7th 1950 *K. McCarthy photo.*

"Burra" at the head of a train of thirty loaded skips heading towards the top of the old incline on the Corrimal Coal Coy 2ft gauge line. c.1962
Late R. Harvey photo.



tained by Mr. Bruce MacDonald and taken to the Goulburn Steam Museum. On March 16th 1974 an ILRMS member, who has an affinity for Krauss products, took delivery of this relic from Goulburn and it is at present stored with TGR "H2". This same member has also obtained the parts of Krauss 6611 of 1912, once employed at the Mount Bauple sugar mill, and these are at the ILRMS Albion Park museum. In addition, a petrol locomotive, powered by a Leyland engine on the chassis and wheels of Krauss 2179 of 1889 has been restored and is now in operation at Albion Park.

Robert Hudson-Hudswell Clarke Loco

0-4-0 well tank. Outside cylinders,
6" diam. x 9"
Hudswell Clarke -
Robert Hudson Builder's No. 1423 of 1922

Several alterations were made to this loco probably at Corrimal.

1. The cutaway wings of the end buffer beams (head stocks) had thick plates welded into position to build up shape to resemble the Krauss product. This was carried out to prevent loco toppling if derailed.

2. The right hand side endges of the end buffer beam plates were cut away, possibly to clear the pipe line laid along the west side of the Corrimal railway.

3. A square, Krauss type, sand box was mounted behind the smoke stack to deliver sand in front of the front wheels.

4. The wind down hand brake mechanism was replaced by a Krauss type level mounted on the back cab wall and applied by the driver swinging out of the side door. This made the loco standard with the other three Corrimal 2ft gauge locos.

This was a standard Robert Hudson type loco, built to their design by the Hudswell Clarke Coy of Leeds.

Horse Power = 25 HP	Diam. of Cylinders = 6"
Stroke = 9"	Min. rail weight = 18 lbs
Min. curve rad. = 40 ft	Normal speed = 5-6 mph
Weight empty = 4 t.12cwt	Weight working = 5t.12cwt
Wheel diam. = 20" (over flanges)	
Wheel base = 40"	Tank capacity = 86 gall.
Bunker cap. = 15 cu.ft	Grate area = 3.5 sq. ft

Heating surface = 117.2 sq.ft
Tractive Force = 2138 lb.
Working pressure = 180 lb/sq. in
Loads in addition to own weight =

level = 80 tons	1 in 200 = 50 tons
1 in 100 = 35 tons	1 in 50 = 21 tons
1 in 40 = 17 tons	1 in 30 = 12 tons
1 in 20 = 7 tons	

Basic Price (c.1935) = £1,256 (England)

This locomotive was constructed for the National Portland Cement Coy. in 1922 as the sole motive power at that company's plant on Maria Island on the east coast of Tasmania. (74) It was supplied by Robert Hudson for Knox Schlapp & Coy. via Hobart.

The Maria Island cement plant ceased operation in July 1930 after being absorbed by the A.R.C. Geelong Cement Coy who operated the Fyansford works in Victoria. The closure was due to high transportation costs and the economic depression of that era.

The engine was purchased by the Corrimal Colliery c.1944 and this enabled the 1914 vintage Krauss to be withdrawn. The writer only observed this engine at work performing light shunting duties at the Corrimal mine yard, assembling skip trains while the Hawthorn loco ("Burra") concentrated on the "main line" trips. In August 1951, however, this Hudswell Clarke engine was photographed at the north end of the line at the top of the old incline, but this may have been a demonstration run for visitors rather than a working journey.

By 1963 this engine was in poor mechanical condition, "Burra" being left to carry out the work around the mine yard.

The loco stood in the engine shed siding at the mine yard until July 1967 when it was transported to Kirrawee(a southern Sydney suburb) for private preservation. No major restoration was undertaken at that location and the loco, fortunately, came into the ownership of the "Southern Highlands Transport Museum" at Colo Vale N.S.W. (75), a group which is noted for their superb restoration and preservation work on fire engines, traction engines, tractors, steam rollers, motor lorries and portable boilers.

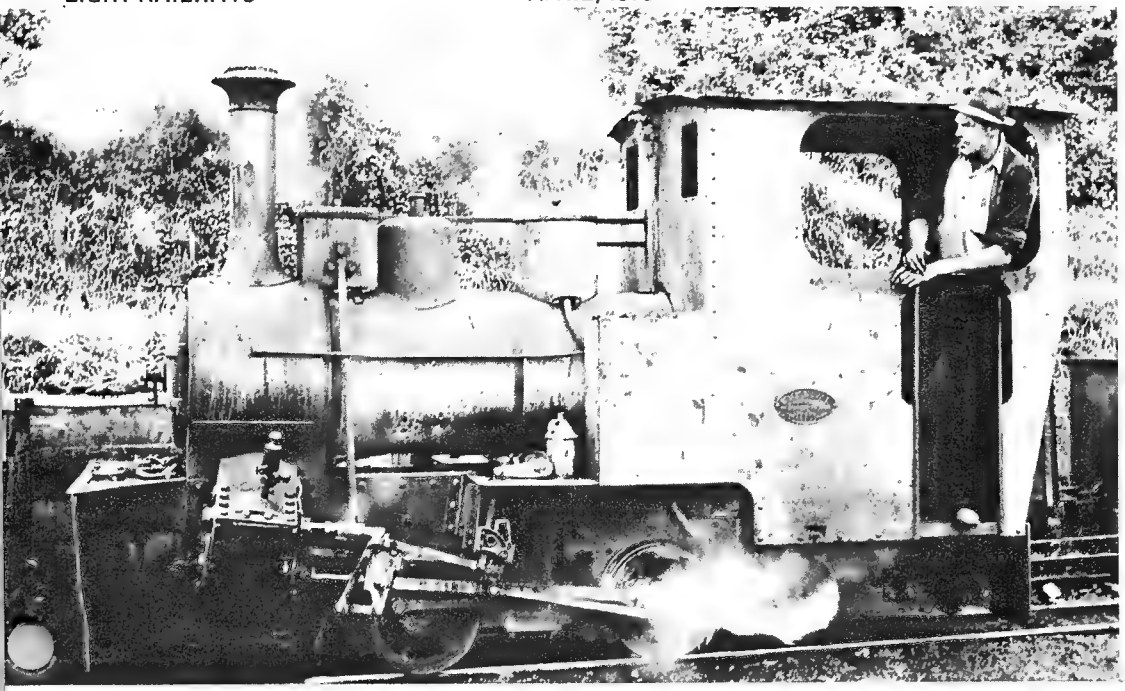
This Hudswell Clarke engine arrived at Colo Vale during February 1972 and over the following four years was completely stripped to enable major restoration to be undertaken. Steam trials were conducted during late 1976 and the last adjustments made in 1977, the loco is now in regular operation on museum "open" days.

R & W Hawthorn Leslie loco.

0-4-0 saddle tank. Outside cylinders,
8" diam. x 12".
R & W Hawthorn Leslie, England
Builder's No. 3574 of 1923.

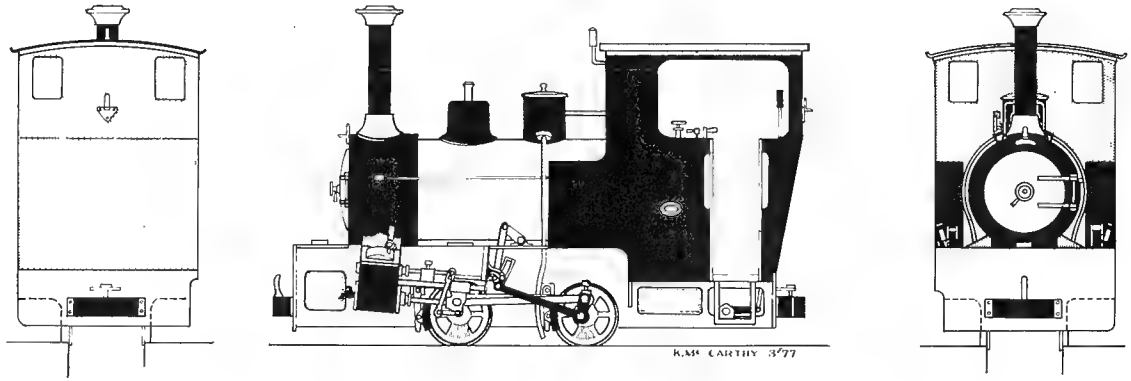
This unit entered service when Krauss "H2" was approaching the end of its active life in November 1923. It was supplied with an American style diamond spark arresting stack but this was replaced with a stovepipe chimney when the loco was reboilered by Clyde Engineering Coy. c.1940.

The engine carried the name "Burra". One school of thought has suggested that as the saddle tank was so small the proposed name "Kookaburra" could not fit on the available area, so the name was shortened to "Burra". This proposition may be correct, but an alternative has emerged in recent years. In Hindustani dialect the word "Burra Burra" means "big and impor-



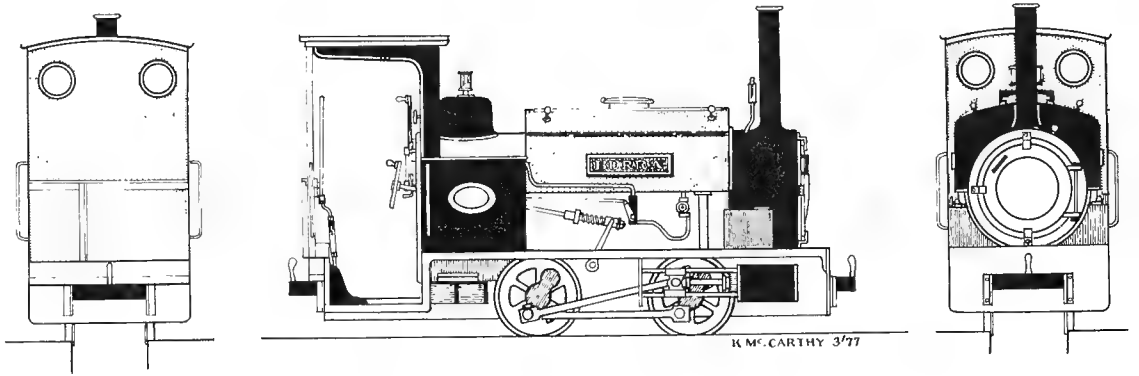
2ft gauge 0-4-0WT R. Hudson Bn 1423/1922 shunting sidings at Corrimal mine, c.1934.
PTC NSW Archives Photo.

2ft gauge 0-4-0ST, R.W.H.L. Bn 3574/1923 pauses for the photographer, note the small spark-arrestor on the chimney c.1934, this was removed in 1940 when Loco was reboilered. *PTC NSW Archives Photo.*



HUDSON ~ HUDSWELL, CLARKE No.1423.

Scale 0 1 2 3 4 5 6 7 8 Feet



HAWTHORN LESLIE No. 3574

Scale 0 1 2 3 4 5 6 7 8 Feet

No. 18 loco at the local unloading staith near Princes Highway Corrimal, Sept. 4th 1951.
K. McCarthy photo.

'Burra' stands alone at Corrimal, note that the "spark Arrestor" has been removed c.1964.
P. Neve Photo.

tant". This is the source from which the "Burra" mines in South Australia were named.

As reported in the "Sydney Mail" for January 4th 1890, "The services of a practical overman holding high credentials from the Indian Government has been secured for the Corrimal Colliery" and it is quite possible that the term "Burra" may have received some usage at Corrimal into the early years of this century.

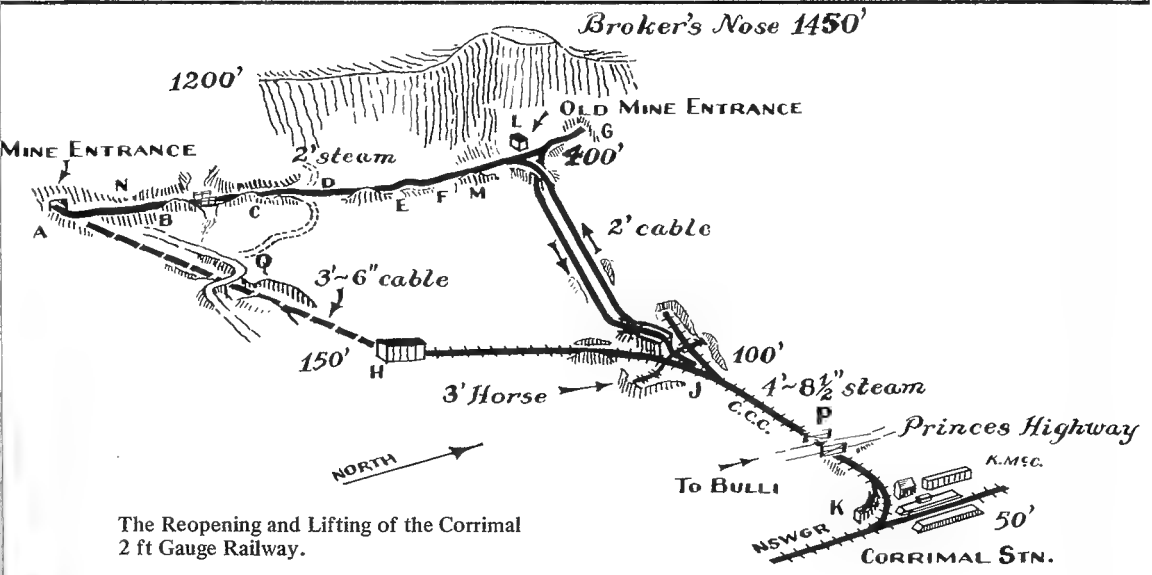
This diminutive loco was certainly "Burra Burra" for the Company as it was largely responsible for the one mile haulage of all coal won from the seam between 1923 and 1955 - - it was certainly "big and important" in its labours.

Together with the Hudswell Clarke locomotive, "Burra" passed to A. I. & S. ownership in March 1964. During 1967 it was taken to the Port Kembla Steel Works diesel loco shops (76) for restoration and repainting, a project completed by December 1967. The engine was then transferred to the plinth in the gardens of the Visitors' Centre by April 1968 where it is still on display.

The narrow gauge locomotives at Corrimal were always positioned on the track with the smokebox facing south. This enabled the smoke to stream away from the cab as the engines worked cab first when hauling the full skips northwards. The standard gauge locomotives always hauled the full coal hoppers down the hill from the screens, and propelled the trains on the return trip from the rear. As the grades were in favour of the loads the main task of the loco on the down hill trip was to keep the hoppers under control. On the return trip, when propelling the empty wagons back up the hill the engines were subjected to steady work. As a result the standard gauge locos were positioned with their smoke boxes down hill.

NSWGR loco 2535 was delivered to the railway the wrong way round, so the engine drivers were subjected to smoke and ash when working a train from the government sidings up to the screens.

2ft GAUGE CORRIMAL LOCOS			GENERAL COMPARISONS	
	Krauss 2589	Krauss 6927	Hudson 1423	Hawthorn 3574
Type	0-4-0 WT	0-4-0 WT	0-4-0 WT	0-4-0 ST
Wheel diam. (treads)	1'10"	1'10"	1'6"	2'0"
Cylinder diam. x stroke	6.3/8"x12"	7" x 12"	6" x 9" orig. 6¼" x 9" now	8" x 12"
Wheel base	3'7¼"	3'7¼"	3'4"	4'0"
Length between buffer beams (headstocks)	12'1½"	13'8"	12'9"	13'7"
Boiler diam.	2'0"	2'6½"	2'8"	3'2"
Centre line of boiler above rail	3'7"	3'10"	4'0"	3'8"
Width over front buffer beams (headstocks)	4'10"	4'11"	4'9"	4'2"
Width over cab sides	4'10"	5'4½"	4'9"	4'2"
Height cab floor to ceiling	6'6"	6'6"	6'0"	6'6"
Valve Gear	Outside Stephenson	Outside Stephenson	Walschaert	Inside Stephenson
Built	1892	1914	1922	1923 (30.7.23 stamped on axles)
Import Agents	Bloomfield	Diercks	Knox Schlapp	N.A.
Details obtained from:-	Relics of loco, gen. arrangement drawing ex T.G.R.	Relics of loco, and also Krauss 6611 (which includes parts stamped 6610)	Actual preserved loco.	Actual preserved loco.



The Reopening and Lifting of the Corrimal 2 ft Gauge Railway.

Before setting down the details of the track lifting project carried out by the Illawarra Light railway Museum Society along the 2 ft gauge mountain railway, the reader is referred to the mountain side sketch of the Corrimal surface workings.

The original mine yard was situated at "L" and coal was delivered down the 2 ft gauge incline (L-J) then along the lightly graded 2 ft gauge line to the terminal and coke ovens on the Bulli Road (Princes Highway) at "P". In 1890 the railway between J-K was reopened as a standard gauge track while in 1906 the 2 ft gauge system was extended southwards for a mile from the old mine at "L" to the new entrance at "A".

All coal won from the Corrimal mine was transported along the route A-L-J-K until 1955 when the 3'6" gauge self acting incline was opened between A-H, and the standard gauge line was extended from J-H. About this time the 3 ft gauge horse worked trackage at "J" was abandoned.

Steam locos continued to work between A-G between 1955 and c1959 to store skips and collect sand from the ovens near "M". By 1963 this steam working was reduced to the mine yard A-B.

The remaining railway sections, A-B, A-H and H-K were closed in 1965 when the A.I. & S. Coy, diverted all coal to Mount Kembla through the Kemira tunnel.

When the ILRMS commenced work on the location the following track conditions were found along the mountainside 2 ft gauge railway:-

A to N Mine entrance to loco shed site.
Track already lifted.

N to B Loco shed to high bridge.
561 ft Track already lifted but 64 ft of temporary track later laid to reach mine dump south of bridge.

B to C High bridge to open store site.
655 ft Track in position, but some resleepering needed. About 350 ft of this section packed with skips.

C to D Store area to vehicle trail.
298 ft Track lifted, but relaid by ILRMS to serve store site clearing.

D to E Trail to "25 ft wash away."
601 ft Track lifted. Location cleared to enable road vehicles to reach washaway.

E to F Washaway to "39 ft washaway."
424 ft Track in position, fishplates removed, rails free from sleepers. Small washaway spanned by bridge (E), rails relaid on new sleepers.

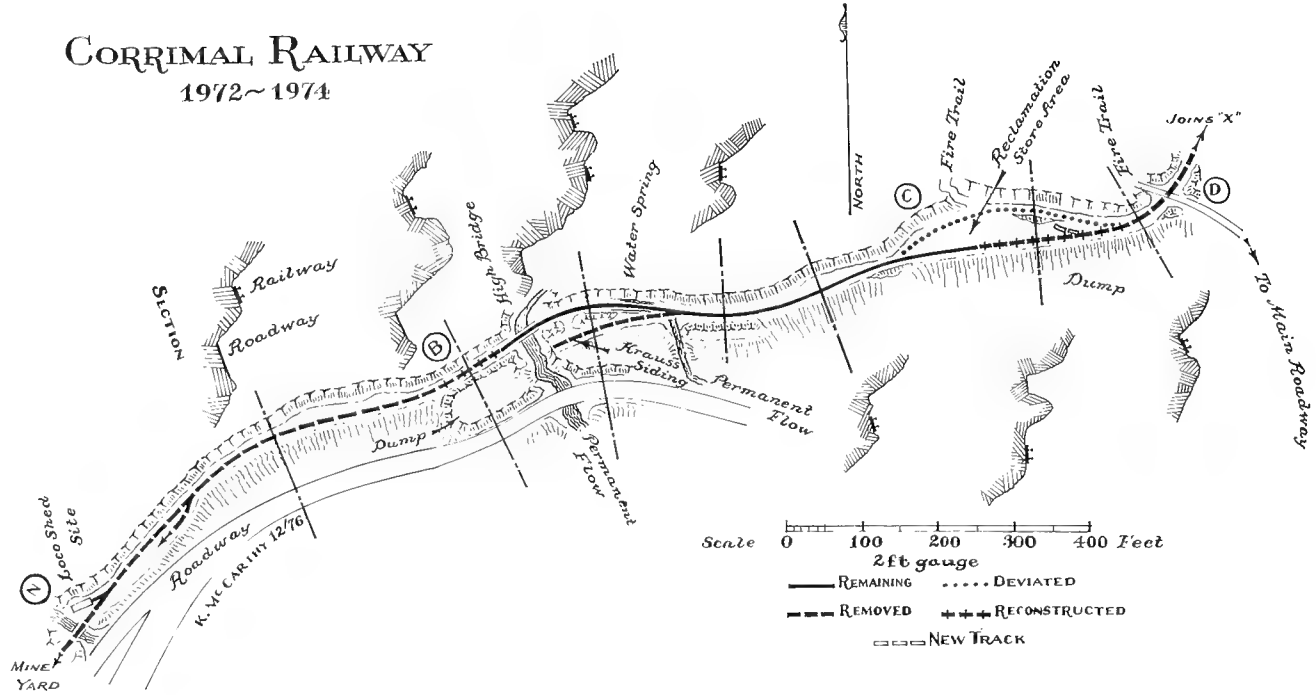
F to M Large washaway to loop points.
821 ft Large washaway spanned by an "A" frame bridge constructed by ILRMS at "F" Track in position, but needed resleepering.

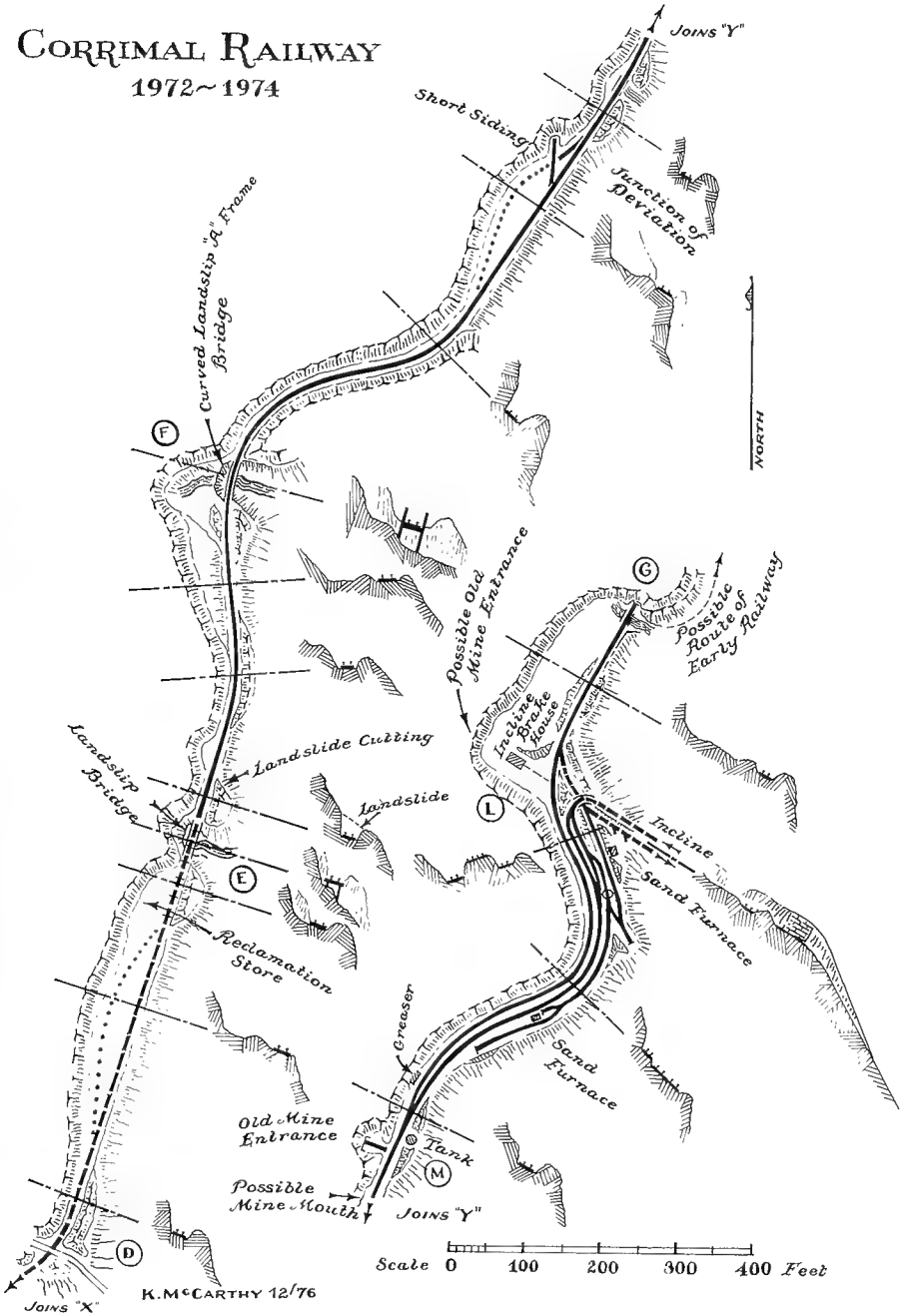
M to L Loop points to incline top.
661 ft Track in position but covered in many placed by almost 9" of silt. Two tracks for 241 ft, 3 and 4 for remainder.

L to G Incline top to end.
258 ft Track in place but heavily overgrown.

The old right of way was heavily overgrown, while just north of the washaway at "E", the track was covered by a landslide, almost 24ft long and over 4ft deep.

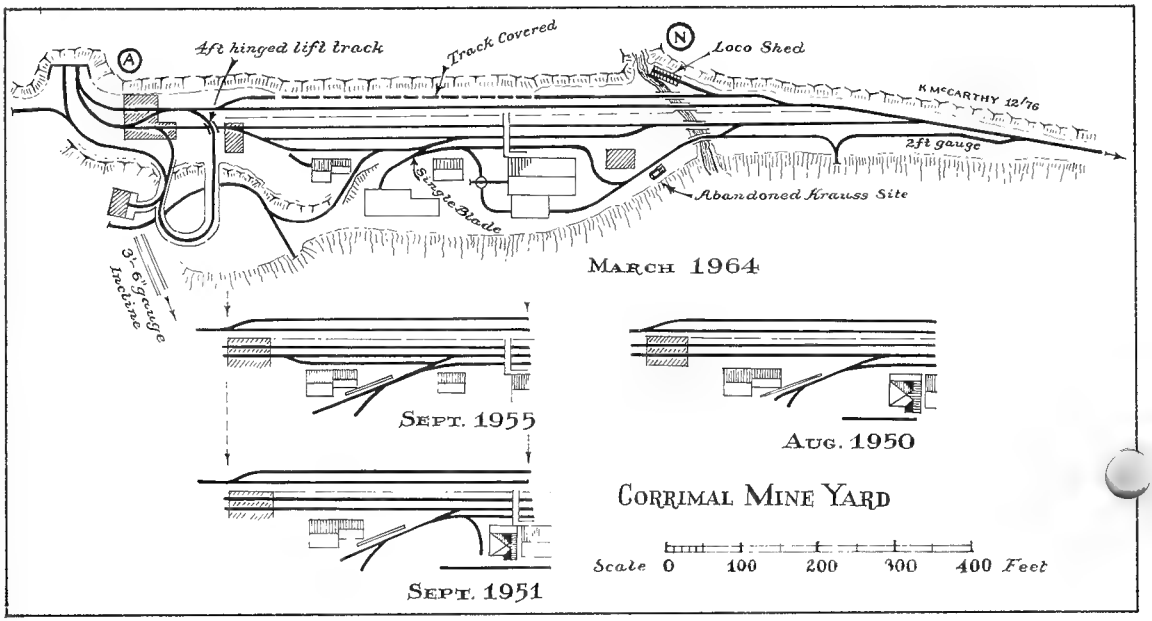
The reclamation method adopted was to reopen


CORRIMAL RAILWAY
1972~1974
NORTH
Fire Trail
Reclamation Stora Area
Fire Trail
Joins "X"
To Main Roadway
Dump
Water Spring
High Bridge
Railway
Roadway
Section
Krauss Siding
Permanent Flow
Permanent Flow
Dump
Loco Shed Site
Roadway
K. McCARTHY 1976
MINE YARD
Scale 0 100 200 300 400 Feet
2ft gauge
REMAINING
DEVIATED
REMOVED
RECONSTRUCTED
NEW TRACK


CORRIMAL RAILWAY
1972~1974
Joins "Y"
Short Siding
Junction of Deviation
Curved Landslip "A" Frame Bridge
NORTH
F
Possible Old Mine Entrance
G
Possible Route of Early Railway
Incline Brake House
Landslip Bridge
Landslide Cutting
Landslide
L
Incline
Sand Furnace
E
Reclamation Store
Greaser
Sand Furnace
Old Mine Entrance
Tank
M
Possible Mine Mouth
Joins "Y"
Scale 0 100 200 300 400 Feet
D
K.McCARTHY 12/76
Joins "X"

the existing track from B to C and E to G and to carry out track lifting from the extreme northern and southern ends. This track would be stacked at the store sites near D and E. Later the rails would be dragged down the trail and restacked at "Q" just off the main sealed mine road, where semi trailers could be loaded.

All sizes recorded here and on the 2 ft gauge scale map, were obtained with a 100 ft tape and compass by the writer aided by ILRMS member R. Frier on November 24th 1973.



The Diary of the Reclamation Task.

The retrieval programme at Corrimal commenced on March 12th 1972 when thick lantana was chopped back from the 3 ft gauge side tip wagon abandoned at the foot of the old incline at "J". On the following Saturday, March 18th, this relic, together with the semaphore signal and crossing gates at "P" were transported to the ILRMS temporary store site.

On April 15th 1972 work started on clearing the track south of the store site from "C" towards "B" on the diagram. The track was resleepered as clearing progressed and derailed skips, abandoned down the hillside beside the track, had to be hauled by block and tackle back onto the railway, and pushed to the store area. Between April 18th and July 22nd 1972, as track reopening continued southwards, almost 280ft of track was relaid from the railhead at "C" northwards to the top of the trail at "D". By May 20th 1972 the southern end of the railway was reached at the high bridge near "B" and all skips packed tightly along the track had been rerailed and taken to the clearing at "D".

Lengths of haulage cable were found beside the tracks. As cables on the incline and in the mine were condemned, the 2 ft gauge locos were used to haul them along the railway where they were abandoned beside the right of way. When landslides occurred along the cables the tension had pulled them across the tracks so oxy-acetylene torches had to be used in several locations to clear the cables from the railway.

On August 5th 1972 some 64 feet of temporary track was laid south of the high bridge to "B", on the sketch, at the mine dump. This was later removed on November 26th 1972 after remaining pieces of Krauss loco "H2" were transported to the store area.

Track clearing activity was next transferred to the northern end. On September 3rd 1972 labours commenced on digging out the 24 ft landslide covering the track near point "E". This was later broken through on January 13th 1973. In the meantime the 25ft washaway at "E" just south of this landslide was bridged between December 30th 1972 and January 13th 1973 and from January 20th work progressed on reopening the track north of the landslide at "E".

A 2 ft gauge four wheel rail tractor was constructed by an ILRMS member using a two cylinder, horizontally opposed Lloyd Hartnett motor as a power source. This was designed to fit on the back of large utility trucks and to haul rails along the Corrimal railway. The tractor was first tried on the south end tracks at Corrimal (C to B) on September 23rd 1972.

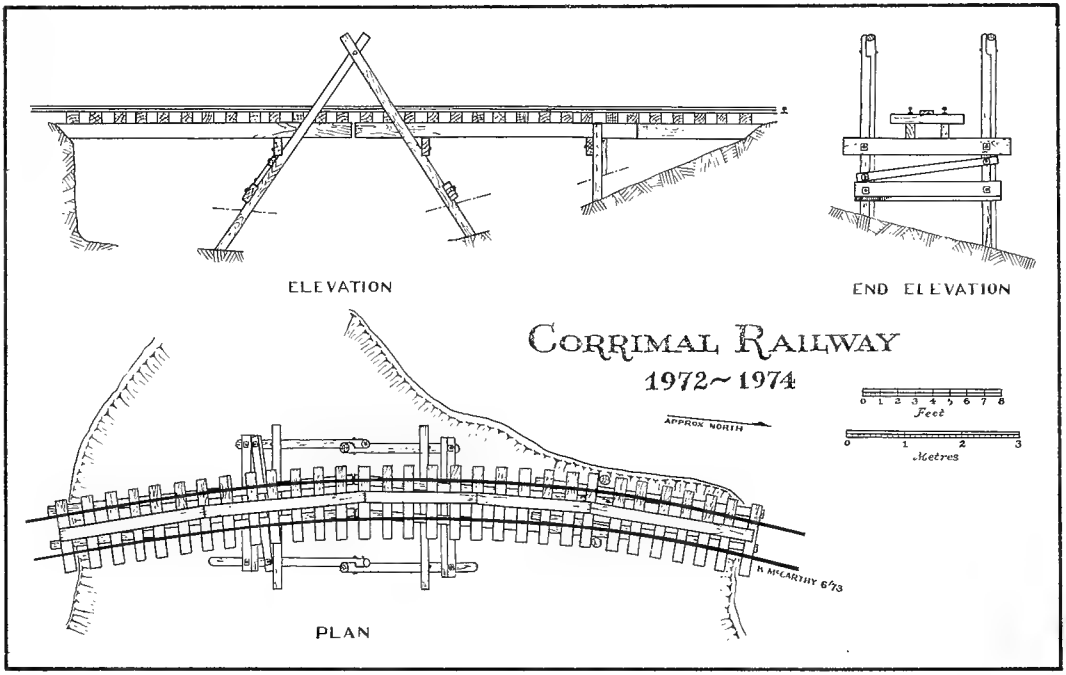
Part of the retrieval task required the ILRMS to clear skips from watercourses along the railway. The gorge below the bridge at the southern end near "B" was choked with skips and the first of these was hauled up a 16 ft length of track, laid down the gorge wall, by block and tackle on December 17th 1972.

Washaway at 'E' before work commenced to restore the track. 1972.

P. Neve Photo.

The Lloyd Hartnett rail tractor venturing across the bridge over the minor washaway at Corrimal, February 1973. (At "E" on the diagram)

K. McCarthy photo.



By February 10th 1973 the track was reopened on the north end between "E and F" to the major wash-away which had left 39 ft of track suspended in mid air. An "A" frame bridge was designed for this site using available materials. This was constructed between February 17th and April 7th 1973 when it was tested by the rail tractor. (See accompanying diagram).

While this long bridge was being constructed, track clearing continued north of the obstruction, the loop points at "F" being reached on April 23rd 1973. The western road of these shunting sidings was selected to be cleared and on June 23rd 1973 the foundation of the old wheel house at "L" was reached and cleared while at 3.10 pm on June 30th 1973 the northern rail end at "G" was reached. Beyond this point, signs of a rail bed reaching further north was discovered, but its history has not been investigated. It could possibly lead to the site of an isolated powder shed used prior to 1906 when the mine entrance was situated at the top of the 2 ft gauge incline, or it may have connected with the South Bulli mine above Bellambi, as both undertakings were under a common ownership just prior to 1890.

The reopened sections at Corrimal accounted for 2,819 ft of track along a roadbed of 4,279 ft from the loco shed at "H" and the north end at "G" in use prior to c.1959.

The cleared track was not lifted by the ILRMS work force immediately. At this stage the search for a permanent museum site was drawing to a successful conclusion and until such a location was prepared to receive the relics, the track was safer left in position at Corrimal. Negotiations with Shellharbour council were launched on May 28th 1973 and access to the Albion Park area was passed by Council on February 20th 1974.

During most of 1974 and into 1975 work progressed at Albion Park, while other locations were visited to search out and collect items for future restoration. During this period work progressed at Corrimal retrieving skips from the watercourses and keeping the undergrowth cut back in this semi-tropical rainforest area. The skips in the ravine near the south end bridge near "B" were hauled up the previously mentioned track, but from July 21st 1973 a flying fox was rigged over the gorge to enable skips further down the creek to be lifted some 25ft to the railway. The last of approximately 20 skips was lifted from the gorge bed on August 25th 1973 and the flying fox dismantled.

On September 8th 1973 track lifting commenced from the southern end near "B" and by October 6th 1973 the last of the southern end permanent track (B-C) was stacked in the store area. Some 52 rail lengths were obtained from this section. By October 30th 1973 most of the new track laid by the ILRMS at "D" had been lifted and stacked as well.

On November 24th 1973 a start was made cracking the fishplate joints on the north end rails between "L" and "G". At this stage the work force was diverted to Port Kembla where a large workshop was purchased and dismantled to provide material for a future loco shed at Albion Park, while the decking on the old Mullet Creek Bridge on the northern edge of Dapto was made available for cutting in to 5 ft lengths to provide sleepers for the museum railway. A return to Corrimal on January 19th 1974 resulted in more fishplate joints being broken and sidings near the top of

Track suspended over the large washaway (at "F" on diagram) Feb. 10th 1973, on the Corrimal 2ft gauge railway. K. McCarthy photo.

The Lloyd-Hartnett rail tractor testing the "A" frame bridge built across the large washaway at "F" on 7th April 1973 K. McCarthy photo.

the old incline being excavated.

Between February and July 1974 the work parties carried out the initial preparation of the Albion Park museum area to take relics and exhibits. The 6 acre initial lease was fenced, gravel spread, gates constructed, store sheds erected, drainage excavated and some tracks laid.

On March 13th 1974 Wollongong was deluged with rain. On that day almost 10" fell in 24 hours on the escarpment. This caused a further washaway under the "A" frame bridge at "F" and the ravages of trail bike riders caused the bridge screws in the main frame to pull apart. on May 11th 1974 a work party hacked backed the undergrowth which was again overhanging the track at Corrimal and surveyed the bridge regarding its repair. The "A" frame bridge was repaired on August 3rd 1974 using bridge bolts in place of the screws in the main frame members, and on August 10th 1974 track work started in earnest from the north end of the railway at point "G"; the top of the incline being reached on August 17th 1974.

The next three months again occupied the ILRMS members at Albion Park to prepare track and space for standard and narrow gauge items due to arrive for preservation. On November 9th 1974, however, the first lengths of north end rails and points components were carted to Albion Park.

Rail reclamation in progress as work proceeds Southwards. *P. Neve photo.*

By coincidence, on March 13th 1975, the anniversary of the last deluge, some 14" of rain fell on the Illawarra Escarpment in 24 hours. The "A" frame bridge stood firm on this occasion but the shorter bridge at "E" was undermined by washaways. The full work party again returned to Corrimal on August 23rd 1975 to repair this structure. In the meantime the ILRMS members had retrieved rails from Tongarra colliery and the Kiama gravel pit bins at Pike's Hill, while the first stage of erecting a large chain wire locomotive compound at Albion Park commenced.

The bridge at Corrimal was available for traffic again on September 6th 1975 and during the following weekend the lantana growth was again hacked back from the north end track enabling track lifting to commence near the rail head at the top of the old incline at "L". As track lifting gained momentum the Lloyd-Hartnett tractor entered regular haulage service, pulling a new four wheel trolley built by an ILRMS member for carrying long lengths of rail. These north end pieces were stacked at "E".

Track lifting advanced to the points at "M" by October 11th 1975, and then the main work party had to return to Albion Park to prepare for the delivery of still more exhibits. On October 29th 1975 a standard gauge Corrimal coal hopper wagon (now owned by the Australian Railway Historical Society) and a 3'6" gauge tub wagon from the mine arrived at the museum. By November 8th 1975 the rail head had shrunk to the "A" frame bridge at "F" and finally, at 4.15 pm on November 15th 1975 the last length of permanent track was lifted at the short bridge at "E". The last use of the rail tractor at Corrimal occurred on October 25th 1975 for after that date the track length was short enough for the rail trolley to be pushed manually to the rail head.

On November 15th 1975 ILRMS members' four wheel drive vehicles were used to drag rail lengths from the stacks at "E", down the steep trail to the last store area beside the sealed road at "Q". This task continued throughout November and December.

On February 7th 1976 some 70 lengths of rail were carried away from the mountain and on March 6th 1976 the first of the rails stacked at the southend rail head at "D" were dragged down to the roadside. The last of this stock reached area "Q" on March 20th 1976.

Although the rails were now close to the main mine roadway, heavy rains during the Autumn of 1976 made the surrounding unpaved area a difficult location for mobile cranes and semi trailer lorries to manoeuvre. Loads of large rocks were carried to the rail stacks on April 24th 1976 to prepare a hard based road for heavy transport. On May 1st 1976 almost 100 rail lengths were loaded and transported to Albion Park and these deliveries continued over the next three months until August 28th 1976 when the last load safely reached the museum.

So a major museum task reached a successful conclusion, which marked the finish of the history of the 2 ft gauge colliery railways at Corrimal.

Acknowledgements.

The writer thanks B. Parle and N. Reed for making photos available to accompany this account. J. Shoebridge, A. Moore and D. Estell are thanked for pro-

viding several items of information which aided in fitting together the historical puzzle. Veteran historian, Mr. Bill Bayley of Bulli is thanked for the work he has conducted for several decades in indexing all sources of Illawarra history. His labours have greatly simplified the work of compiling this and other treatments of the area. His indexes, deposited in the Wollongong City Library, places the researcher immediately on the path of contemporary reports of the topic being researched.

Finally Mr. John Grierson of the A. I. & S. Collieries Office is thanks for paving the way for the ILRMS to gain access to the Corrimal railway while none of this retrieval would have been possible but for the tremendous volume of negotiations carried out by the active ILRMS secretary Mr. Tony Madden.

References.

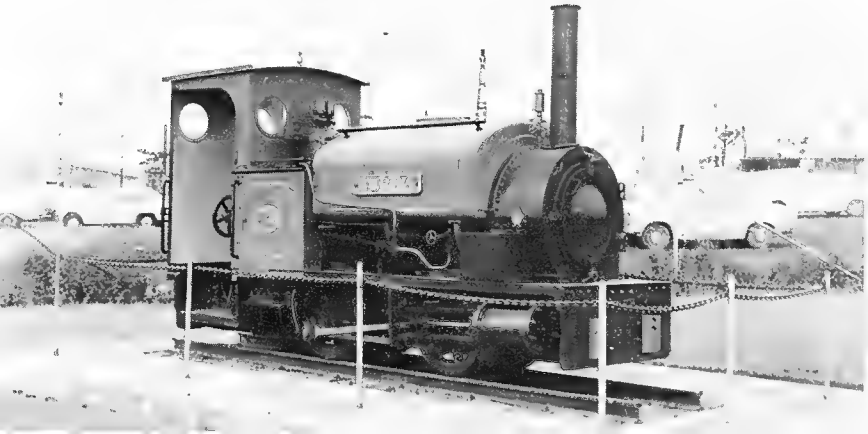
1. *"Illawarra Mercury" Oct. 4th 1888.*
2. *"Wollongong Argus" April 20th 1882.*
3. *Ibid. June 29th 1882.*
4. *"Illawarra Mercury" June 15th 1883.*
5. *Ibid. January 11th 1884.*
6. *Ibid. July 16th 1885.*
7. *"South Coast Times" Sept. 12th 1947.*
8. *"Illawarra Mercury" Dec. 1st 1885.*
9. *"Illawarra Mercury" Dec. 26th 1885.*
10. *Ibid. Dec. 1st 1885.*
11. *Ibid. June 18th 1887.*
12. *Ibid June 15th 1886.*
13. *Ibid. Feb. 16th 1888, Aug. 9th 1888.*
14. *Ibid. June 18th 1887.*
15. *Ibid Jan. 5th 1889, "Wollongong Argus" Jan. 5th 1889.*
16. *"Illawarra Mercury" Jan. 5th 1889.*
17. *Ibid. Nov. 17th 1888.*
18. *Ibid. Feb. 16th 1888.*
19. *Ibid. Feb. 23rd 1889, April 6th 1889, July 4th 1889.*
20. *Ibid. Dec. 14th 1889.*
21. *Ibid. Nov. 24th 1888.*
22. *Ibid. Feb. 23rd 1889, Feb. 26th 1889, July 11th 1889.*
23. *Ibid. Nov. 7th 1889, Nov. 9th 1889.*
24. *Ibid. Nov. 30th 1889.*
25. *"South Coast Times" March 18th 1927.*
26. *"Illawarra Mercury " May 20th 1890.*
27. *Ibid. June 3rd 1890.*
28. *Ibid. June 14th 1890.*
29. *"Kembla News" Dec. 15th 1967.*
30. *"South Coast Times" Dec. 8th 1906, May 14th 1951.*
31. *"Fitted for the Voyage" M. Page. Rigby Publisher.*
32. *"The Port Kenbal Harbour Works Railway" - G. Eardley. ARHS Bulletin No. 131.9/1948.*
33. *"Illawarra Mercury" March 21st 1911.*
34. *"Early Locomotives of NSW Railways" – "E-17 Class". ARHS Bulletin No. 141.7/1949.*
35. *"Illawarra Mercury" June 28th 1912.*
36. *Ibid. May 9th 1911.*
37. *Ibid. Feb. 16th 1912.*
38. *"South Coast Times" August 2nd 1912.*
39. *"Illawarra Mercury" August 2nd 1912.*
40. *Ibid. March 16th 1915.*
41. *Ibid. August 4th 1916, August 15th 1916.*
42. *"Railway History in Illawarra" – C. C. Singleton. p.50.*
43. *"Illawarra Mercury", April 22nd 1921, July 8th 1921.*
44. *Ibid. Sept. 23rd 1921.*
45. *"South Coast Times" May 14th 1951.*
46. *"Kiama Independent ' Nov. 5th 1896.*
47. *"Illawarra Mercury" March 3rd 1911.*
48. *"South Coast Times" May 10th 1912, "South Coast Times" Sept. 6th 1912.*
49. *"South Coast Times" Dec. 12th 1924.*
50. *"Illawarra Mercury" May 31st 1881.*
51. *Ibid. August 18th 1882.*
52. *Ibid. October 24th 1882.*
53. *Ibid. August 21st 1883.*
54. *Ibid. Feb. 2nd 1912, Feb. 6th 1912.*
55. *"South Coast Times" March 28th 1913.*
56. *Ibid. March 7th 1919.*
57. *"Illawarra Mercury" Sept. 29th 1920.*
58. *Ibid. April 1st 1921, April 6th 1923.*
59. *Ibid. July 24th 1925.*
60. *Ibid. Jan. 12th 1883.*
61. *Ibid. Sept. 10th 1926, August 27th 1926.*
62. *Ibid. Dec. 2nd 1948.*
63. *Ibid. Feb. 1st 1918, "South Coast Times" Feb. 1st 1918.*
64. *"Kembla News" Dec. 15th 1967.*
65. *"The Roundhouse" January 1966. "the Story of No. 18"*
    "ARHS Bulletin" No.231 January 1957. "The Corrimal Railway" C. C. Singleton.
    "ARHS Bulletin" No. 99 January 1946. "The Port Kembla and Corrimal Railways."
66. *"ARHS Bulletin" No. 391 May 1970*
    "Krauss Locomotives in Australia"
    B. Macdonald and C. Small.
67. *"Light Railways" No. 27 Autumn 1969*
    "Victoria Dock Construction" M. Plumber.
68. *"Light Railways" No. 46 Summer 1973-4*
    "The Tasmanian "G" class 2 ft gauge Locomotive".
69. *"Light Railways" No. 43 Autumn 1973*
    "Hagan's Patent Locomotive"
70. *"Railroading in Tasmania" T. Cooley.*
71. *"ARHS Bulletin" No. 99 January 1946.*
72. *"ARHS Bulletin" No. 231.*
73. *"Belmont Common Magazine" June 1972.*
    "Maria Island and its Tramways."
74. *"Southern Highlands Transport Museum"*
    Colo Vale N.S.W. Visitors' Guide.
75. *"Kembla News" Dec. 15th 1967.*

CCC1 hauling a pole, presents an unusual sight when working at Corrimal October 1963.

P. Neve Photo.

2ft gauge R. Hudson loco in operation at Colo Vale on 11th December, 1977. Running on the "Highlands Light Railway"

P. Neve photo.



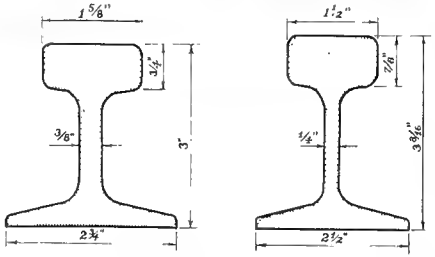
"Burra" on display at the Port Kembla Steel Works Visitors' Centre. June 24th 1972

K. McCarthy photo.

No. 18 at the foot of the old incline at Corrimal Colliery. Sept. 4th 1951 *B. Parle photo.*

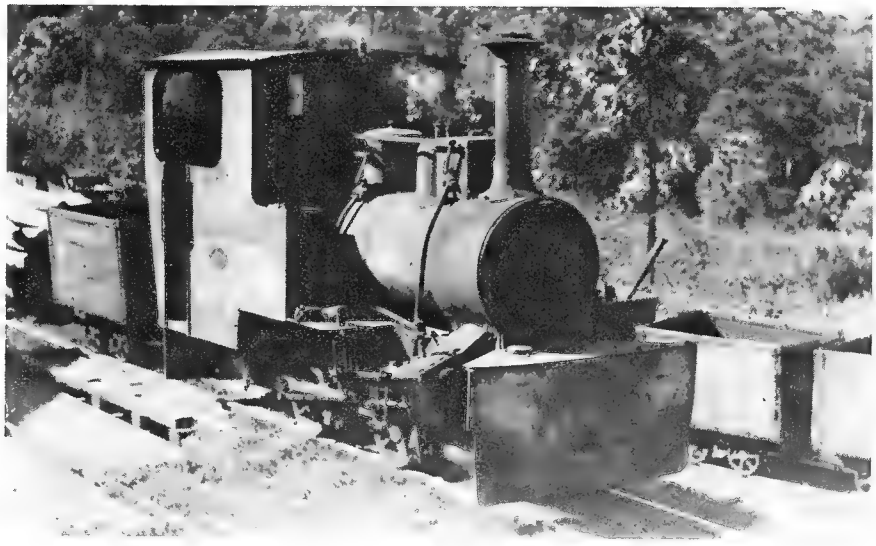
Krauss loco No. 6927 abandoned beside the main line (near "C" on diagram) at Corrimal mine. August 7th 1950. K. McCarthy photo.

Rail dimensions as taken from the reclaimed Corrimal rails.



New Section 28lb. *Old Section 25lb.*

Robt. Hudson 0-4-0T loco (Built by Hudswell Clarke) B/No. 1423 at the Corrimal Mine Yard, August 6th 1951. N. Reed photo.



This photo shows both "Burra" and Krauss Bn 6927 near the Loco Shed c.1934, the smokebox door on the Krauss Loco was reversed in later years so as to open in the opposite direction.

PTC NSW Archives Photo.

Digging through the land slide on the north side of the small bridge at Corrimal ("E" on the diagram), January 1973. K. McCarthy photo.

Southern Coal Coy loco No. 1 later Corrimal No. 1 on the Unanderra Colliery Railway with a "picnic special". The coaches are NSWGR 2nd class car and guard's van No. 36. c.1895 W. Bayley collection.

Hauling out the rails near the top of the old incline at Corrimal, August 1974. The Lloyd-Hartnett rail tractor is seen hauling the specially built rail trolley.
K. McCarthy photo.

I.L.R.M.S. work party stops for a "tea break" during the arduous rail retrieval task. As seen in these photos as work proceeded Southwards. *P. Neve Photos.*

"Burra" at the water tank near the top of the old incline, Corrimal Colliery, Sept. 4th 1951.
B. Parle photo.